15¢

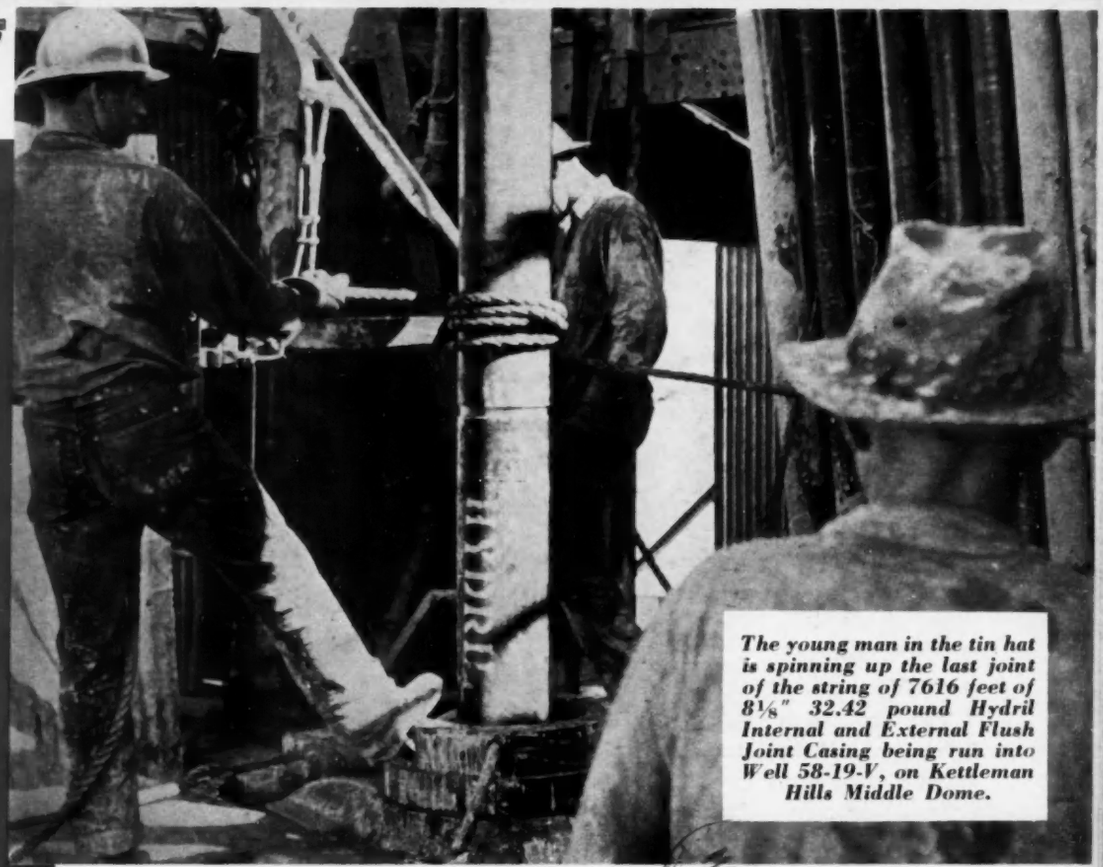
The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

HYDRIL



The young man in the tin hat is spinning up the last joint of the string of 7616 feet of 8⅛" 32.42 pound Hydril Internal and External Flush Joint Casing being run into Well 58-19-V, on Kettleman Hills Middle Dome.

HYDRIL

Internal and External Flush Joint Casing

Running inside of 5625 feet of 10¾-inch casing and in 1991 feet of 9⅝-inch open hole to bottom, this string of Hydril Casing was completely run in exactly five hours. Well No. 58-19-V was drilled for the Kettleman Hills Middle Dome Association with the Hydril Rotary, Six-Speed Draw works and Three Cylinder Vertical Steam Engine. The pipe on the rack is 5-inch Hydril External Flush Joint Drill Pipe.

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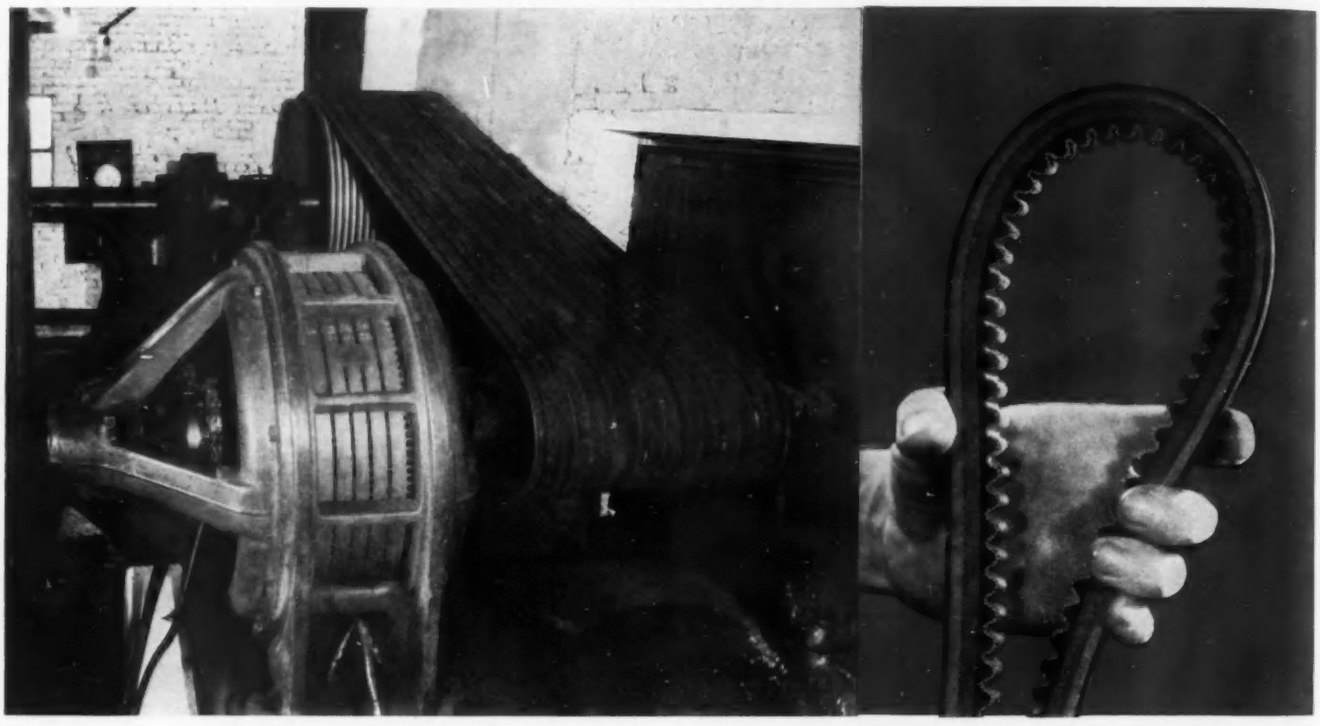
effect unusual savings in Power _Operating Costs_Floor Space



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SEEING IS BELIEVING . . .

and many hundreds of successful cement jobs are proof!

HERE is what the Baker Cement Whirler Shoe does in the hole. Whether the shoe rests on bottom, tends to lean against the side or hangs free, the baffled side ports give the cement an upward whirl around the casing and assure complete distribution with channeling practically eliminated. When a successful cement job is of prime importance leading operators specify the

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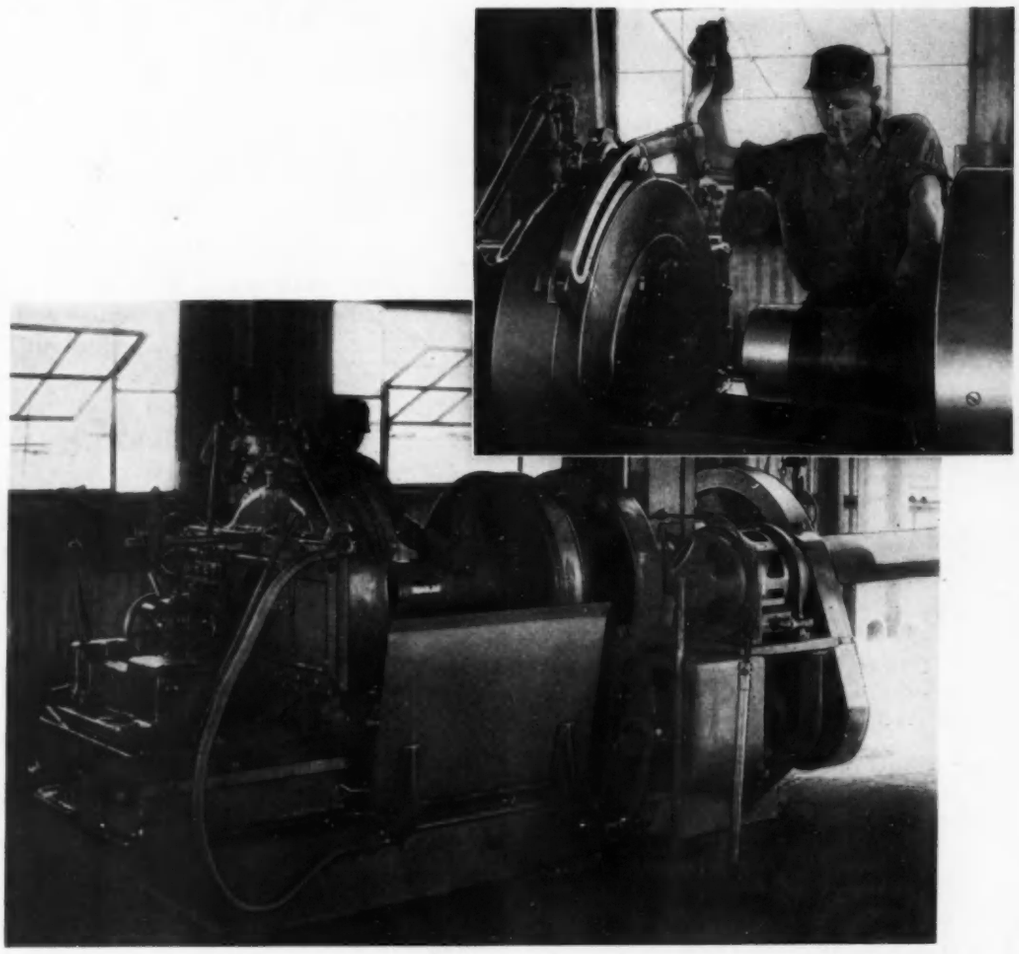

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THE OIL WEEKLY

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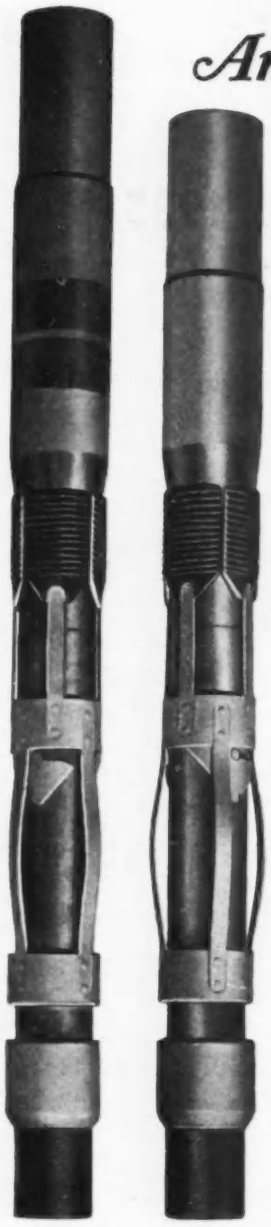

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(b)

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING · NEWS · STATISTICS

The Changing Panorama

New Federal Bill

A NEW federal control bill, known as a Federal Petroleum Act, has been introduced into the Senate by Senator Thomas of Oklahoma. This bill, which would accomplish practically the same things that the unsuccessful Disney-Thomas bill of last year would have, sets up a new yardstick for control in that it is based upon sales quotas rather than production limits. It also would create a federal petroleum board of five members, and has other interesting provisions. Page 11.

New Mexico

THE State of New Mexico promises to become a more important oil producing area. Last week the Moument area of Lea County came in the limelight when a wildcat test was deepened and placed on gas lift and resulted in a flow of 900 barrels. Although not a spectacular producer, it is expected to rival Hobbs, Eunice, Cooper, et al. This gives New Mexico a chain of fields in Lea County of great importance, and the majority of them are in their active stage at present.
Page 72.

Tax Increase

OKLAHOMA oil men are waging one of the most important legislative battles ever faced by the industry in the state. The House has passed a proposed gross production tax bill that would increase the tax from three to eight percent. More than 500 oil men gathered at Oklahoma City last week to protest to the Senate their objections. Based on 1934 pipe line runs, an eight percent tax would yield $14,000,000 or more in revenue. If passed by the Senate, it is expected to be signed by Governor Ernest W. Marland, although he has expressed a desire for a five percent tax on gross production. Many oil men have threatened to conduct their business in other states if the bill is enacted. Page 12.

Compact Legality

ONLY through the flat-footed stand of Texas representative was the matter of price fixing left out of the interstate compact plan adopted at the recent Dallas

Foreign

OIL FIELD DATA

THE *Foreign Edition of* **THE OIL WEEKLY will contain condensed development histories of most of the oil and gas fields of the world outside of those in the United States of America.**

Did you know that this is the first time such information has ever been compiled and presented by any oil publication, and that this is the first time such data have been gathered and published in one book?

Did you know that many readers of THE OIL WEEKLY at home and abroad have taken an active part in that compilation?

March 18 is THE OIL WEEKLY'S Foreign Issue, on which the editorial staff has been working for one full year.

meeting of governors from the oil-producing states. As a result, Governor James V. Allred of Texas has been criticized by many. It is true from an operating standpoint that it would be well to consider the economic aspect of market price, but it must be reiterated that the constitutionality of including market price in conservation measures is open to question. A. W. Walker, Jr., professor of law at the University of Texas, who personally is neutral upon the subject, has prepared a comprehensive study of the situation. His study is excerpted for the convenience and value of our readers.

Page 14.

Tubing Practices

WEST TEXAS operators have devoted much time to a study of tubing practices, and as a result production efficiency has been advanced. Each type of producing well must be considered individually and it is impossible to adopt a uniform tubing program. Small diameter strings are keeping many weak wells flowing.

Page 25.

The Oil Man's Calendar

MARCH
6 *North Texas Oil & Gas Association, Annual Meeting, 6:45 P.M., Wichita Falls, Texas.*
21-23 *American Association of Petroleum Geologists, Wichita, Kansas.*

APRIL
8-13 *Oil Equipment and Engineering Exposition, Houston, Texas.*
10-11 *American Petroleum Institute, Division of Production, Mid-Continent District, Spring Meeting, Amarillo, Texas.*
11-13 *Petroleum Industry Electrical Association, Dallas, Texas.*
18-19 *National Petroleum Association, Cleveland, Ohio.*
22 *American Chemical Society, New York.*
25-26 *American Petroleum Institute Division of Production, Southwestern District, Plaza Hotel, San Antonio, Texas.*

MAY
1-3 *Natural Gasoline Association, Tulsa, Oklahoma.*
8-11 *Oil and Gas Power Division, American Society of Mechanical Engineers, Tulsa, Oklahoma.*
14-16 *American Petroleum Institute, Mid-Year Meeting, Mayo Hotel, Tulsa.*

JUNE
20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

SEPTEMBER
25-27 *National Petroleum Association, Atlantic City, New Jersey.*

NOVEMBER
4-5 *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*
11-14 *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*

Use of Aerated Gas

AN interesting and valuable experiment has been conducted with reference to air-gas mixture, particularly concerning keeping this mixture up to a combustible fuel for gas engines. It has been determined that the application of a proper back-pressure on the wells being repressured is beneficial.

Page 19.

Large Deal

ANNOUNCEMENT was made last week that Stanolind Oil & Gas Company is negotiating for the purchase of Yount Lee Oil Company. Thus the long rumored deal is admitted to be in the making. It will represent one of the largest transactions, if consummated, within the industry in several years.

Several additional acquisitions of considerable size are understood to be underway, one of which may be closed this week. The fact that large companies now are willing to make such purchases indicates their belief in the future of the oil industry.

Page 16.

Back-Side Crank Pumping

THE practice of pumping wells from the back-side crank has been growing in popularity in recent years, therefore being of great engineering importance. There are a few simple principles to be observed in locating the front and rear cranks with respect to one another if best operating conditions are to be attained. Frequently, a simple analysis of the effect of a change in the relative position of the cranks will enable elimination of overloads.

Page 31.

World Records

TWO interesting new world records may be in the making. A new drilling depth record is practically assured by Gulf Production Company's J. T. McElroy 103, Upton County, West Texas, which, as this is being written, is but 11 feet short of the depth record now held by General Petroleum Corporation's Berry 1, Belridge, California, which is bottomed at 11,377 feet.

In Oklahoma, the famous Binger well of Denver Producing & Refining Company may yet become a producing well. Lift equipment is being installed. If it produces commercially it will be the deepest producing oil well in the world. The well has a depth of 11,230 feet and has been flowing by heads for several months while completing a difficult fishing job.

New Oil Law Brings Optimism

JACK LOGAN
Associate Editor

Shipping control under Conally measure expected to result in strict oil law enforcement and improved markets. Producers hope for higher crude prices, with increased stability in prospect. New oil bill in Congress will apparently meet opposition within the industry. Big companies buying leases and wells in anxiety over reserves.

THE picture in oil has become enveloped in a decidedly optimistic atmosphere. For East Texas there is in prospect a virtual elimination of hot oil producing and refining. And largely for that reason, there has arisen talk about a possible increase before long in the price of crude oil as well as of refined products.

The bright outlook for East Texas is based on anticipation that federal shipping control will be restored shortly, under the new Connally law. Late last week the federal government had not yet resumed actual participation in regulating oil shipments. But it was scheduled to do so immediately. An executive order setting up a new federal tender board was expected to be promulgated at once, and preliminary work toward launching the new control program was in progress.

Hot Oil Expected to Dwindle

IT is anticipated generally that the control of hot oil in East Texas under the new set-up will be as effective as it was in early January and December, before the Supreme Court decision in the Panama-Amazon cases invalidated oil shipping control under the NIRA. For several weeks prior to that decision, the federal tender board and a similar state tender board were succeeding in holding hot oil output to the relatively insignificant volume of about 10,000 barrels daily.

Stronger Markets Anticipated

IF such effectiveness is achieved under the new program, there will undoubtedly result an immediate firming up of the markets for gasoline and other refined products. Such strengthening of the markets would be particularly likely, it is believed, in view of the general desire in the industry to build up gasoline stocks for meeting increased spring and summer demand.

Strength of the markets for refined oils would be directly reflected, it is figured, in the crude oil markets. The hope is being entertained among producers, consequently, that an increase of crude oil prices may be in store. In the Mid-Continent, it is being said that an increase of 25 cents a barrel may be hoped for, if control in East Texas actually proves as effective as it promises to be.

Enforcement More Effective

IT was indicated last week that East Texas hot oil output had undergone a slight decrease from the previous week's volume, due to determined enforcement efforts of the state authorities.

There have been various set-backs lately for those not in step with the East Texas oil control program. Through injunctions in state courts, the state authorities succeeded in closing down several refineries that were alleged to be violating the Texas Railroad Commission's orders and regulations. The state also was expected to shut down, similarly, additional plants. The refineries involved were restrained from violating the commission's orders.

Federal court at Tyler in the meantime refused to grant injunctions that would have permitted operators immunity from the commission's program, because complainants that sougth the injunctive relief could not prove source or legality of oil they sought to ship.

Truck Movements Cause Difficulties

MOVEMENT of refined oils, particularly gasoline, out of East Texas by trucks has resulted in the most serious leaks of hot oil. But such shipping of questionable oil has been made more difficult lately. The Texas Highway Patrol has mustered about 25 additional men for service in East Texas, in collaboration with the railroad commission. The patrolmen are checking the oil-hauling trucks minutely, and are arresting the drivers that are found

violating any of the state motor regulations. A report last week indicated the drivers of 80 trucks had been arrested and fined around $40 each, in justice of the peace courts.

This represents a roundabout but apparently rather effective method of enforcement. For the railroad commission and the attorney general's department and the county courts to take action against a gasoline-laden truck involves a lot of red tape and costly and slow prosecution, under the oil conservation laws. For the highway patrol to find a truck driver violating motor and highway regulations and to gain a conviction in a justice of the peace court is a simple and quick procedure. The fines that are imposed take the profits out of hot gasoline moved by the trucks, and thus help to enforce the oil control program.

These various influences toward reducing the hot oil output in East Texas were having a salutary effect on the markets. With the supplies of hot gasoline being somewhat curtailed, there has been a little firming of the markets.

New Bill Viewed Suspiciously

THE petroleum industry is looking with confidence toward inauguration of the new phase of stabilization under the recently passed Connally law, which authorizes the federal control of oil shipping. The industry consequently is not likely to become enthusiastic over the Thomas bill, introduced last week in the United States Senate. The Connally law involves only what has been tried, and what has proved successful. The Thomas bill would involve stricter federal control, similar to that contemplated last year in the Thomas-Disney bill. At a time when it is entertaining visions of a 25-cent increase in crude oil prices by virtue of a law that has just been enacted, the industry will naturally be suspicious of a new and untried proposal that might completely change the outlook.

Similar to Thomas-Disney Bill

THE new bill, introduced by Senator Elmer Thomas of Oklahoma, is said to be similar not only to the old Thomas-Disney bill, but also to a measure that Representative Wesley Disney of Oklahoma proposes to introduce in the House. It would set up a tender board and prohibit interstate shipment of oil in excess of sales quotas fixed by a five-member federal petroleum board, headed by the Secretary of the Interior. (The Connally law prohibits shipping oil in excess of state production allowables.) The Thomas bill would also regulate imports and storage withdrawals.

There was widespread and determined opposition to the old Thomas-Disney bill from within the oil industry. The industry was unwilling to accept, without a struggle, a measure that seemed to embody the threat of irksome federal restraint.

It is not at all likely, therefore, that the new proposal, sponsored by the same authors, will readily muster the support of any overwhelming majority in the industry.

Ickes Clings to Public Utility Idea

CONVERSELY, it is but natural that the Thomas and Disney proposals have the approval of Oil Administrator Ickes, who so doggedly but in vain fought for the original Thomas-Disney bill.

The oil administrator has, however, definitely swung to the opinion that even the Thomas-Disney type legislation is not sufficiently rigid to control the oil industry as it should be controlled. More and more attractive to him becomes the idea that the oil industry should be made a public utility, rigidly controlled by the federal government. He has indicated that legislation for full federal control will be sought during the present session of Congress.

Purchases Reflect Anxiety Over Reserves

SEVERAL bits of information that have come to light lately emphasize the increasing concern of the large oil companies over reserves of crude oil for the future. Recently came the information that the Humble Oil & Refining Company last year made capital expenditures of about $42,000,000, of which a large amount was spent in acquiring producing properties and undeveloped leases. More recently has come the confirmation that Stanolind Oil & Gas Company has progressed materially in negotiations toward acquiring the vast producing properties and pipe line and storage facilities of Yount-Lee Oil Company in Texas and Louisiana. The latter deal, when and if consummated, will represent the largest transaction of the kind for years, and one of the largest on record.

Few New Fields Lately

THE East Texas field was discovered late in 1930, Conroe at the end of 1931. Both were unusually large and prolific fields, and they pushed into the background, temporarily, the idea that the search for new oil fields must be incessant, as consumption draws heavily and steadily on existing reserves. But since Conroe was found—over three years ago—the new discoveries have been coming slowly and at relatively long intervals, and even those, in most instances have been relatively unimportant.

In the meantime, moreover, stocks of crude and refined oils have been steadily dwindling. They are at the lowest levels for about eight years.

There is ample ground for the anxiety that the large companies are entertaining over reserves. And it is entirely conceivable that within a few years oil will be relatively scarce and high in price.

Federal Control Bill *Introduced That Is* Based Upon Sales Quotas

Washington, D. C.—Setting up a new yardstick for oil control through the application of sales quotas rather than production limits, Senator Elmer D. Thomas of Oklahoma on February 25 introduced in the Senate an oil bill providing for the creation of a new organization for federal regulation of the industry.

Declared by its author to be similar to the unsuccessful Thomas-Disney bill of the last session and to follow largely the line of the measure prepared but not yet introduced by Representative Wesley Disney of Oklahoma, the Thomas bill provides for a limited federal supervision of production, but makes no pretense of going into either the refining or marketing phases of the industry.

The bill differs from the Connally contraband oil law in that while the latter prohibits the interstate shipment of oil produced in excess of state restrictions the former seeks to prohibit the interstate transportation of oil in excess of federal allocations, while at the same time imposing no restrictions whatever upon the amount which may be produced in a state.

The measure follows the "New Deal" innovation of opening with a "declaration of policy" citing the injurious effect of excessive supply upon commerce, admittedly designed to forestall any question by the courts as to the purpose of the act.

It sets up a Federal Petroleum Board of five members, the Secretary of the Interior to be chairman and the remaining four members to be named by the President, at least three from a list recommended by trade associations within the industry.

Provision also is made for the creation of a tender board and the issuance of clearance certificates, similar to the plan of the Connally bill, and limits imports and withdrawals from storage, corresponding generally to the present plan of voluntary restriction of imports.

The measure provides for the recognition of state compacts, but requires that compact allowables must coincide with federal allocations. A following section definitely limits the authority of the petroleum board to establish any quotas within any state whose production is kept within the equitable share of the national production as determined by the board.

The vital section of the bill, it was declared, deals with quotas in commerce. "It observes the distinction between production and commerce," it was explained, "and undertakes to deal only with sales or other acts of commerce.

"Sales quotas," Senator Thomas said, "not production quotas, would be authorized. Moreover, the federal authority would keep hands off so long as the state as a whole remained in line. No restriction of sales from pools or properties would be permitted under this act in the absence of overproduction for the state as a whole, which is in complete consonance with the contention of some of the states that they should be allowed to deal with their internal production problems.

"As to the practical operation of this section of the bill there need be no confusion. Apart from statistical work, factual studies, determination of national demand, and its allocation to the producing states, the board would take no action so long as the production of the country and imports are in balance with demand for domestic consumption and export, and there is no state where too large a share of the market is being seized. It is conceivable that through cooperation and state enforcement of state orders or through state compacts, with the federal law in the background, it might never be necessary for the federal agency to go further. But upon the occurrence, despite state efforts, of excess production and its movement into commerce in excessive quantities, the board would act under this section. Imports being at a rate found proper and fair, the fixing of domestic quotas in commerce would be in order. They might be fixed for and in a single state or for and in several or all of the producing states. But quotas in commerce would be fixed.

"For the same reasons that stripper wells and settled production are virtually exempt from production restrictions now," he continued, "they would be exempt under the quotas-in-commerce system. In other words, their production would be free to move in commerce without let or hindrance or supervision from any source. On the hypothesis that present code allocations to states, and those by state authority to pools and properties, would be fair and proper if restrictions were upon a production basis, it may be assumed that commerce quotas would correspond to them in quantity. Only flush pools and properties would presently be affected by the new system."

Penalties in the shape of fines or imprisonment, or both, are provided for violation of the proposed law. In addition, the government would be authorized to bring suit against violators to recover the value of the oil illegally shipped. The Connally law provides for confiscation of such products.

The Thomas bill is a combination of measures suggested by the Planning and Coordination Committee, the Independent Petroleum Association of America and other oil organizations. It is not what is termed an Administration bill and neither Oil Administrator Harold L. Ickes or other oil administration officials were consulted in either its preparation or introduction.

Refusing to comment on the measure, Administrator Ickes indicated that the Disney bill will be supported by the Administration when it is introduced, but intimated that a bill for full federal control would be introduced before the end of the session.

Full Text of Proposed Thomas Petroleum Act Page 40

Amended Injunction Bill Passes Senate

Austin, Texas.—The Texas Senate last week passed the bill recommended by Attorney General William McCraw, which is designed to prevent the issuance of injunctions against the Texas Railroad Commission without a hearing.

The measure obtained 21 votes in the senate, but was amended there. Previously the bill as drawn by McCraw was passed by the house with 114 votes. The vote on the bill in each house was sufficiently large to insure immediate effectiveness.

The senate amended the bill by a provision which would require that at least five days' notice be granted before the hearing on the application for injunction is held. The bill passed by the house provided that the hearing be held within a "reasonable time, not to exceed 10 days."

Sponsors of the measure believe that a satisfactory bill will be worked out during this week.

Oklahomans Fight *Proposed Five Percent Production* Tax Increase

Oklahoma City.—Oil men left the state capitol on Thursday, February 28, divided in their opinion as to the success of the four-day battle they had waged against a house bill that proposes to increase gross production tax from the present three percent to eight percent. The industry was represented by more than 500 men from all districts and phases. Stripper well owners plead that such an increase would cause the abandonment of many of their wells which hold a large portion of the state's remaining known reserves. Owners of larger wells testified that the increase would preclude the possibility of any profit and throw them back into the red column from which they have emerged after a three-year battle of drastic economy. Equipment manufacturers and distributors testified that the excessive tax would materially effect their business and labor representatives testified that thousands of men would be thrown out of work.

In the face of this testimony members of the senate committee on revenue and taxation asked the question, "How much additional tax can the oil industry pay?" This was answered by the question, "What is to be done with the money exacted from the industry?" and by the suggestion that the legislature bring a concrete picture of actual conditions before the people.

James A. Veasey, director and chief counsel for Carter Oil Company made the suggestion that a four percent production tax be levied but this apparently was not generally concurred in by representatives of the industry. The net result was that on Thursday, February 28, the committee returned the bill to the senate without recommendations. Senator Al Commons, chairman of the committee, expressed the opinion that the senate will pass the eight percent bill already passed by the house. Others in the upper house believed that the measure could not pass and that it might be cut to something near the five percent recommended by Governor Marland. Still others who were in attendance at the hearing believed that the bill would be returned to a joint committee for a general overhauling.

Joe T. Dickerson, attorney for Shell Petroleum Corporation, cited an example of the advantage that might be gained by turning to other states even under the present three percent gross production tax. In Kansas the yearly tax on a 10-barrel lease with oil selling at $1.00 per barrel would be $60.80 while in Oklahoma the same lease would be taxed $109.50 under the three percent gross production tax alone.

W. W. Warner of Nowata, vice president of Warner-Caldwell Oil Company and president of the Oklahoma Stripper Well Association, presented the attitude of small well owners of the northeastern portion of the state. He asserted that the 10,490 stripper wells of Nowata and Rogers Counties would be in danger of abandonment and added that competent engineers have estimated the remaining recovery of such wells to be in excess of 600,000,000 barrels under orderly and sustained development practices.

R. M. Williams, attorney for Indian Territory Illuminating Oil Company at Bartlesville, stated in the 30 years of the company's operations that it had invested and reinvested chiefly within the state more than $160,000,000. Of this amount more than $24,000,000 went to employes and to contractors and others, $30,000,000 in the acquisition of leaseholds, drilling and production of wells etc. Continuing he said, "Our total expenditures for non-producing leases on which we paid rentals of $3,500,000 cost beyond that sum $14,000,000. We have spent $5,000,000 for dry holes and $60,000,000 in drilling and the company has yet to receive a substantial return on the expenditure." He disputed the contention that a larger tax rate should be placed on the larger wells, citing wells in the Oklahoma City pool for example.

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The bill is aimed at "midnight" injunctions through which operators were able to move oil without Railroad Commission tenders, and is a combination of two bills for this purpose which were introduced in the house. They were rewritten in the Senate by Senator Clint Small of Amarillo. Under this bill no injunction, whether temporary restraining order, temporary injunction, or permanent injunction may be granted against orders of the Texas Railroad Commission except after notice and hearing. At least five days must elapse after the notice is served before the hearing may be held. Each order of the commission is presumed prima faci valid, and no allegation of fact or affidavit presented may overcome this presumption. If an injunction be issued the plaintiff operator must furnish sufficient bond to indemnify all affected parties. Either party to any suit filed may appeal from a district court ruling to the civil appeals court, where such cases take precedence over all other cases on the docket which are of a different nature. Appeals to the Supreme Court from the appelate courts take similar precedence. Either of the higher courts may issue writs of prohibition, mandamus and injunctions to prevent the enforcement of any order or judgment of any trial court or judge granting any injunctive relief without notice and hearing.

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MOORE SERVICE *THRIVES ON ROUGH WEATHER*

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The Interstate Compact *and the Future of* Market Demand Proration

Excerpts From Article
By
A. W. WALKER, JR.
Professor of Law
University of Texas

THE failure of the recent conference at Dallas of the governors of the oil producing states to reach an accord upon any interstate compact for the restriction of the production of crude petroleum on the basis of reasonable market demand, despite the fact this was one of the primary purposes for the conference from the standpoint of a majority of the states represented, raises a critical question as to the future attitude of the oil producing states in their several capacities on this most vital problem. This is particularly true in view of the fact that the Petroleum Code, with its production control features predicated upon market demand, will terminate with the expiration of the National Industrial Recovery Act in June, unless extended by Congress, and that the market demand law of the principal petroleum producing state will likewise automatically expire by its own time limitation on September 1 of this year, unless extended by the Legislature of Texas, now in session. It is not too much to say that the future of the entire market demand control movement, which has made such rapid advances in the principal petroleum producing states during the past few years, will be largely determined by the action of the Texas Legislature. It is very questionable if the States of Oklahoma and Kansas, and a recent convert to the market demand control movement, the State of New Mexico, would be able to pursue their present policy of restriction of production to market demand if the State of Texas should decide to desert this standard of limitation.

In some quarters the attitude of the Texas representatives at the governors' conference has been interpreted as indicative of an hostile viewpoint by the present administration in that state to an extension of its market demand law. It is believed that this is an entirely unwarranted assumption. Opposition to an interstate compact that would give rival producing states a voice in determining the amount of production from a state is an entirely different thing from opposition to a plan for the exclusive control by a state of its own production. Regardless of divergent views as to the merits of an interstate compact, it is readily understandable that one state on grounds of policy might well object to even a partial surrender of its power to control its own production to rival producing states. However, regardless of the personal views of the governor, it is considered probable that the present market demand law in Texas[1], which was passed only after a bitter struggle on November 12, 1932, will meet with some opposition when an extension is sought at the present session of the state legislature.

There are three provisions in the compact as finally approved at the conference which may be taken as having some bearing upon whether market demand control of production by each state in its separate capacity comports with the spirit and terms of the proposed compact.

In Article II it is provided that "The purpose of the compact is to conserve oil and gas by the prevention of physical waste thereof from any cause." In Article III, sec. (e) each signatory state binds itself to enact laws to prevent "The drilling, equipping, locating, spacing or operating of a well or wells so as to bring about physical waste of oil or gas or loss in the ultimate recovery thereof." And in Article V it is expressly provided that "It is not the purpose of this compact to authorize the states joining herein to limit the production of oil or gas for the purpose of stabilizing or fixing the price thereof, or to create or perpetuate monopoly . . . "

A. W. WALKER, JR.

If the control of production on the basis of market demand can meet these tests, viz., that it is designed to prevent physical waste, and will promote an increase in the ultimate recovery of oil, and is not designed to fix prices or to promote monopoly, it may be urged that it would be obligatory upon each of the contracting states in their several capacities, if the proposed compact is finally consummated, to adopt or to continue market demand control of production even though it is not specifically named as a conservation measure.

It is apparent from the very statement of these tests that all the controversial questions are raised over which the battles for proration upon the basis of market demand have been fought in the past. Some of these battles have been waged before legislative bodies; others in courts of justice.[2] In view of the imminence of the problem it would seem worth while to review these battles for the purpose of determining the legality of market demand control as well as its ability to meet the standards imposed by the recently proposed interstate compact.

At the outset it is obvious that no matter how desirable market demand control may be from an economic viewpoint, it is absolutely necessary that its legal validity be clearly established, otherwise any discussion of market demand control except upon a purely voluntary basis would be entirely academic.

The landowner's ownership of all oil that he could induce to come into his well regardless of its source, commonly referred to as the law

(*Continued on page 52*)

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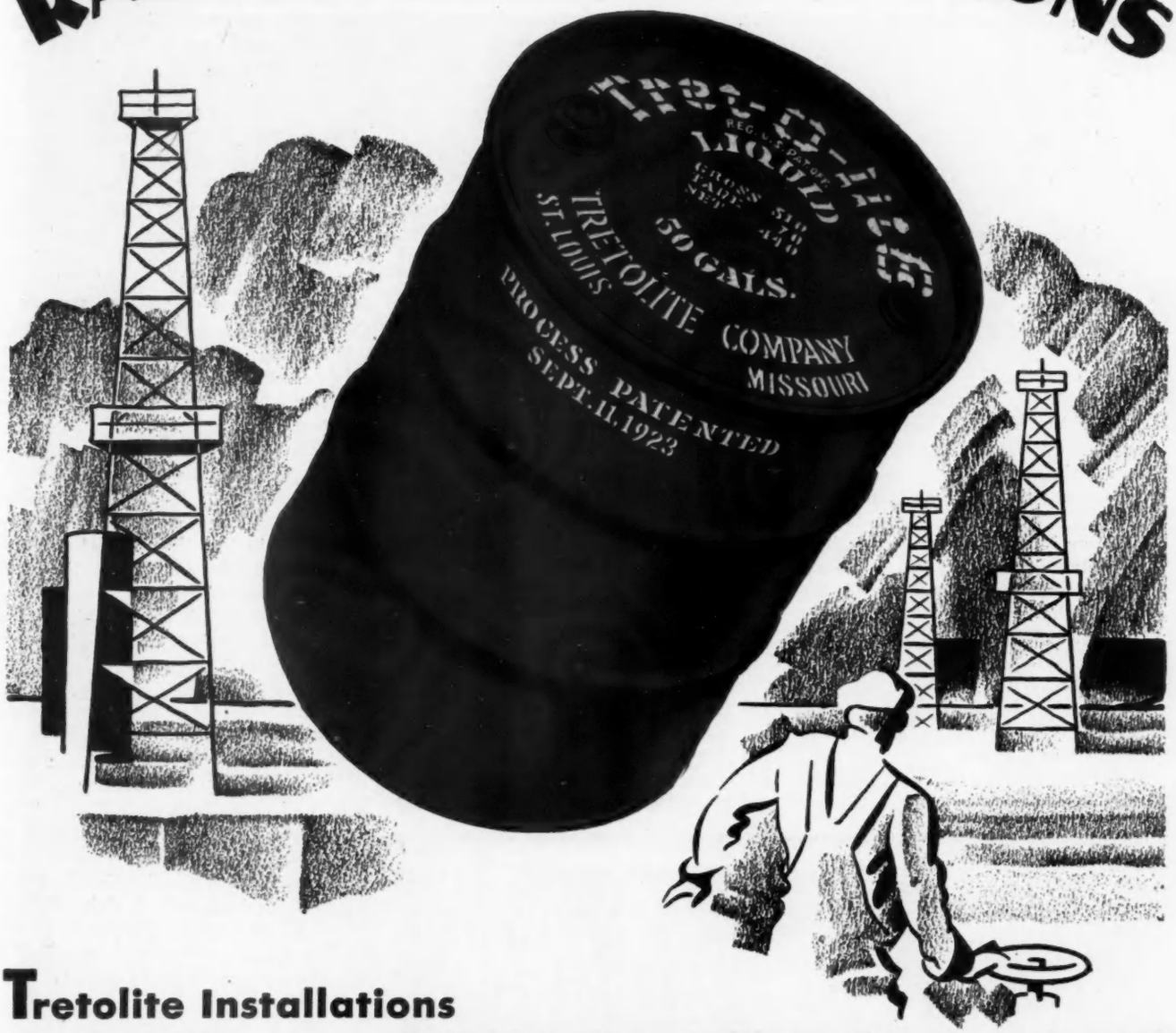

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Stanolind Negotiating *for the Purchase of* Yount-Lee Properties

Houston. — Definite announcement was made last week on the long rumored Stanolind Oil & Gas Company negotiation for purchase of Yount-Lee Oil Company of Beaumont, Texas.

In a statement released in Houston Frank O. Prior, president of the Stanolind Oil & Gas Company, stated "It now is feasible to announce that Stanolind Oil & Gas Company, producing subsidiary of Standard Oil Company of Indiana, now is carrying on negotiations with a third party who has obtained an option from Yount-Lee stockholders for the purchase of all stock of Yount-Lee Oil Company. Stanolind Oil & Gas Company is checking the properties with the view of acquiring from the third party production, undeveloped acreage and pipe lines of Yount-Lee Oil Company. These properties are all situated in the State of Texas and Louisiana. Negotiations are still far from being concluded."

While no information has been given out by Stanolind Oil & Gas Company or Yount-Lee Oil Company officials on the purchase price it is reported between $45,000,000 and $65,000,000. It has been rumored for several months that Yount-Lee Oil Company had been dealing with several of the major oil companies for sale of its holdings in Texas and Louisiana.

Yount-Lee Oil Company is one of the outstanding independent operators of Texas and Louisiana, with extensive producing properties, pipe line holdings, storage and tanker loading facilities.

It became an important concern through the discovery of new deeper flank production in the old Spindle Top field, near Beaumont, and has been remarkably successful in numerous other Gulf Coast fields. During the early development of the East Texas field, it became heavily interested there.

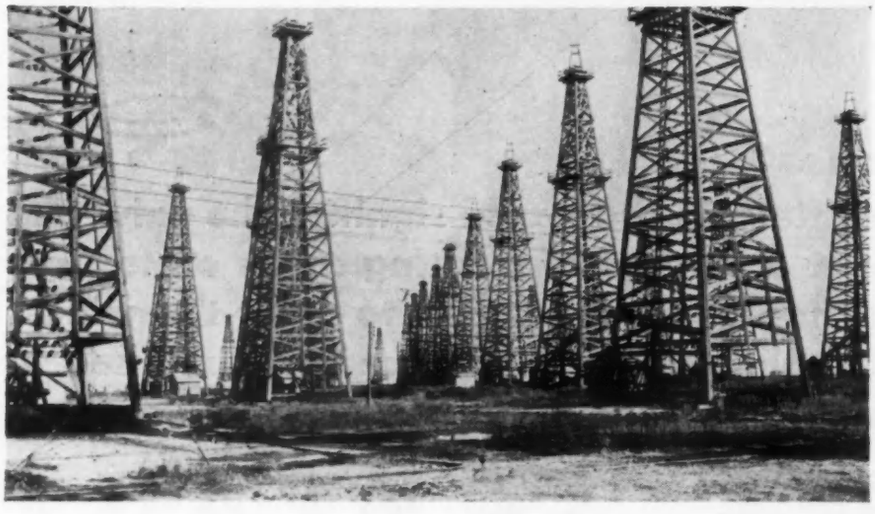
The present holdings of Yount-Lee Oil Company in the Longview section of the East Texas field, include 2322 productive acres. The operators have 268 producing wells with a daily proration allowable of 7300 barrels. At present the company has four active drilling wells in the field. As a unit these properties are reported to command a price of more than $35,000 per well, based on current property values in the East Texas field, or about $9,415,000.

Yount-Lee Oil Company owns a one-third interest and Sun Oil Company a two-thirds interest in Sun-Yount-Lee Pipe Line Company's 198-mile, 10-inch trunk line, extending from the East Texas field to the Yount-Lee Oil Company's estimated 6,000,000-barrel storage tank farm at Beaumont, Texas, and loading terminal, which is operated by the two companies. This joint pipe line project was originally a 50-50 proposition, but Sun Oil Company increased its interest to two thirds early in 1933 because of furnishing about two thirds of the traffic on the pipe line. The maximum daily capacity of the pipe line is rated at 47,000 barrels. All Yount-Lee Oil Company's East Texas production is routed via this line.

Stanolind Crude Oil Purchasing Company is the largest buyer of crude in the East Texas field, but has been using the facilities of Humble Pipe Line Company, entirely in gathering and transporting the crude to the Mexia terminal and station of Pan-American Pipe Line Company, a unit of Standard Oil Company of Indiana, then is moved via the latter system to the Texas City plant. Current crude takings by Stanolind Crude Oil Purchasing Company in the East Texas field average 39,975 barrels daily from 1510 wells, and includes 11,286 barrels of controlled production (by Stanolind Oil & Gas Company) and 28,689 barrels of purchased crude.

It has been reported that the Texas City refinery is to be enlarged after the deal with Yount-Lee is consummated. The refinery now averages from 30,000 to 35,000 barrels daily on the East Texas crude. Stanolind Oil & Gas Company is lining up a permanent crude supply for this plant along with its increasing demands from Standard Oil Company of Indiana in supplying crude. It is plausible that this reason is one of the major reasons why Stanolind Oil & Gas Company is dealing with Yount-Lee Oil Company.

On the Texas Gulf Coast the Yount-Lee has large producing properties at High Island, Galveston County; Barbers Hill, Chambers County; Spindle Top, Jefferson County; Hull and South Liberty, Liberty County and Sour Lake in Hardin County. In the Louisiana Gulf Coast major holdings are at Jennings in Acadia Parish, Old and East Hackberry in Calcasieu Parish and Welch in Jefferson Davis Parish. drilling at present in the Coast area.



A scene in the Spindle Top field, showing some of Yount-Lee Oil Company's deep flank producers that are a valuable part of the company's properties.

Kettleman Properties Sold for 12 Million

Los Angeles.—New York dispatches confirm sale of Pacific Western Oil Corporation holdings at Kettleman Hills and Inglewood in California to Shell Oil Company for reported consideration of $12,000,000. Ten million dollars in 6½ percent bonds will be assumed by Shell and remaining of purchase price in cash and short term notes. Pacific Western's other California holdings are not affected. Paul Getty, head of Pacific Western, is in New York.

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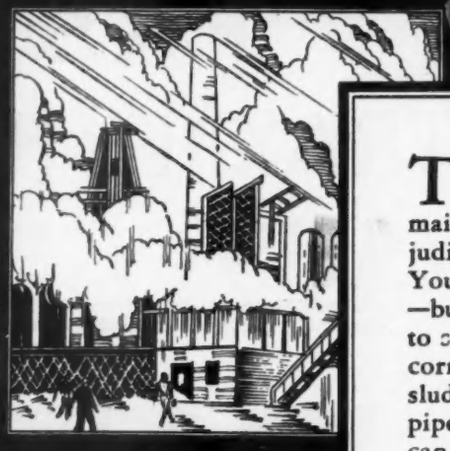

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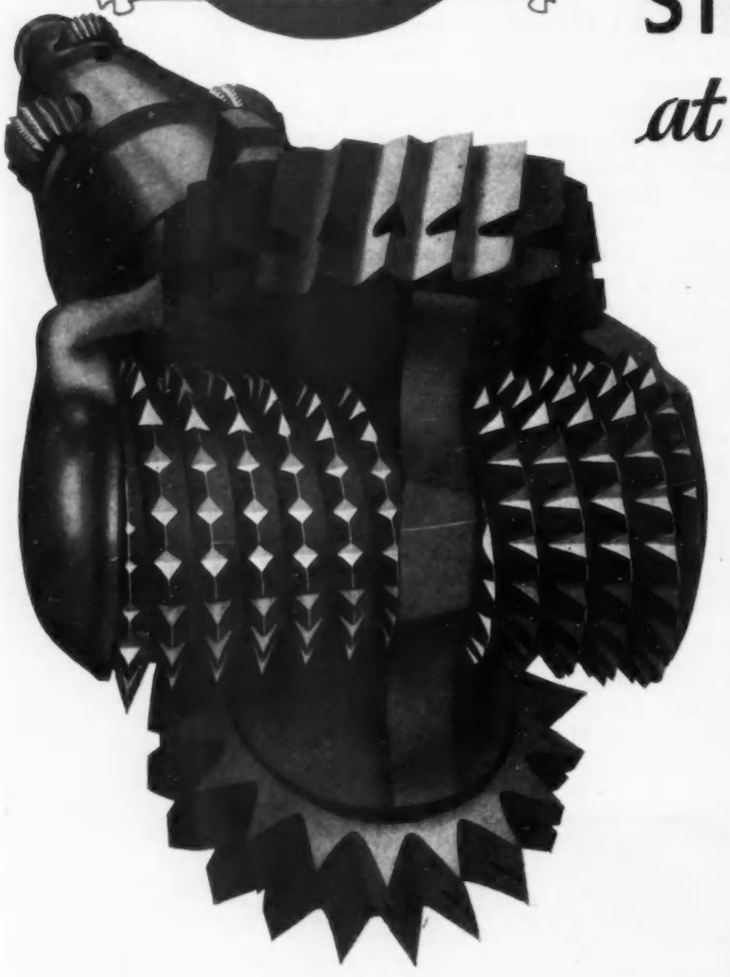

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IT is difficult to record and often hard to determine definitely the exact findings and outgrowth of each experiment applied in actual operations because invariably there are conflicting conditions and happenings incident to and a part of the operating procedure, which can neither be prevented nor abated.

For example, when the operating fuel of aerated gas mixture coming from the casing heads of oil wells reaches a point where daily repressuring operations become hazardous because of a bad mixture of gas and air, it is customary to start remedying the condition by several different experiments at the same time, when the cause cannot be determined readily. Incidentally, the hazard is removed, but by what change or combination of changes is not known until later, when a more thorough examination and analyses are made.

Over an area of some six miles, comprising about 150 shallow stripper wells under repressure in the producing formation with compressed air on the "five-spot" method, a very interesting and valuable experiment with reference to the air-gas mixture has come to light, in keeping this mixture up to a combustible fuel for gas engi.

Not a great deal has been written on this subject for several reasons. First, it has never been in sufficient quantity to attract much attention. Second, due to difficulties in the past, it has been considered unusable after a certain point is reached, and allowed to escape out the casing heads, wasted.

In due time it now appears that this subject will attract considerable attention due to some increase and anticipated increases in the use of artificial restoration of rock pressure with air.

When we have learned more about the application of air to fuel mixtures so as to obtain the possible maximum of energy in fuel components we will have learned only the laws of natural science that have been in existence since the creation of the world, lying dormant, waiting patiently for some one in harmony with the creative forces to tap the main. There are many precedents for this thought, such as the discovery of electrical energy, ether and electrical waves and light beams, etc. We might classify our scientists and engineers, etc., into two distinct classes in accordance with their contribution towards their fellow men that ultimately leads to advancement. First, there is the type such as Benjamin Franklin who, in his research work, developed many patentable ideas and inventions, but never took out a patent, instead he gave them to the people that they and the nation might be helped. Second, those who have made a great success in their work—but for financial or other reasons keep their useful discoveries a mystery and a secret. However, they are not to be criticized because it enters into good business, which is essential for further development.

A great deal has been said about carburetors and air mixers for combustion engines that convert the gas into 95 to 98 percent air, which, of course, is nothing new to those experienced with combustion engines and combustible fuel mixtures. It is possible to use a gas for fuel for gas engines when it has reached the maximum air content under properly controlled methods. Some of the most important features at the gas engine is a large gas header and a regulator located close to the engine to regulate the gas coming from the gas header. Too much gas, caused from increased volume or line pressure of aerated gas, will kill an engine much quicker than a shortage.

An engine is much more sensitive in its operation on badly aerated gas, and will die much quicker when the gas is not exploding at each compression of the engine. The coming and going of the gas in the line caused by pumping, or wells blowing by heads, has to be regulated at the wells. If a badly blowing well is allowed to empty into the main line it most likely will ruin the gas mixture for efficient operation. A badly blowing well close to an engine will ruin the gas for that engine unless properly controlled or turned out of the line or piped to some other point on the line.

Even though the air-gas mixture is rich in the main line, if sufficient gas from high volume producing wells is run into the main gas line so that the pressure exceeds 10 pounds it is difficult to get the regulator to handle it. Aerated gas will not regulate the same as gas without air mixture. Nor will the governors work as efficiently if the main gas line pressure builds up too high. This feature is overcome by some operators by installing a pop valve in the gas line near the center of operations. A more conservative method of holding the gas line pressure down is to control the high volume wells at

the casing heads by holding the necessary back-pressure. This conserves the gas and has a tendency to increase its fuel value. Indications by tests over six months period might indicate five percent to 10 percent decrease in production. But owing to the fact that a back-pressure has a tendency on some wells to eliminate a certain percent of cut oil and also conserves the gas and lowers the gas-oil ratio, it is very evident the ultimate recovery will be increased.

In order to understand the flow of the gas from producing wells under artificial repressuring it is imperative to know something of the formation through which the air is traveling. If there are soft streaks in the sand the air will soon work a channel, and if it leads to a producing well it will gradually retard production and the casing-head gas becomes unfit for fuel. If the air escapes out into other formations it is entirely lost and will trap a certain amount of oil with it or drive it off into other formations and be lost. However, it is known definitely how much air is injected into the sand and by a check of the volume from the casing heads it can readily be determined if a loss exists.

The most disagreeable feature about the aerated gas for fuel is the fact that there is a tendency on the part of those operating engines on it to blame any trouble not readily understood to a bad gas mixture, which after a careful check is made, turns out to be entirely different. Or, if a well doesn't pump as it should, the foremost though is that the back-pressure has caused the well to quit pumping. This, of course, will happen sometimes, but not as often as it gets the credit.

Example

Suppose an injection well has 30 feet of good sand and injection of air is 1000 feet per foot of sand thickness. On the "five-spot" method there are four closely surrounding wells. Their sand thicknesses are:

No. 1 .....30 feet
No. 2 .....35 feet
No. 3 .....20 feet
No. 4 .....10 feet

Wells 3 and 4 are outside wells, and on higher structure. It would appear that the air would first traverse up-structure toward the lighter wells. But the sand on the outside wells is less porous and the air finds the least resistance toward the thicker sand on an even structure. As the air works through the sand there is an initial increase in production at each well somewhat in proportion to its sand thickness. Assuming there is no interruption by water or other impervious conditions, it will be noted that the air working to the wells through the sand in following the customary line of least resistance will gradually concentrate upon one, two or three of the best wells, depending on permeability, porosity and uniformity of the porous reservoir and viscosity of the oil. Rightly recognized, this is the beginning of a condition by which change in the direction of air travel in the sand can be effected on an entire lease under favorable structure and sand conditions.

Pressures Exerted by Water and 30 Degrees Baume Oil (.8762 Specific Gravity) at Given Depths

Depth Feet	Water Press., Lbs. Sq. In.	Oil Press., Lbs. Sq. In.	Depth, Feet	Water Press., Lbs. Sq. In.	Oil Press., Lbs. Sq. In.	Depth, Feet	Water Press., Lbs. Sq. In.	Oil Press., Lbs. Sq. In.
5	2.17	2.11	55	23.82	23.22	200	86.62	84.44
10	4.33	4.22	60	25.99	25.33	300	129.93	126.66
15	6.50	6.33	65	28.15	27.44	400	173.24	168.88
20	8.66	8.44	70	30.32	29.55	500	216.55	211.10
25	10.83	10.55	75	32.48	31.66	600	259.86	253.32
30	12.99	12.67	80	34.65	33.77	1000	433.10	422.20
35	15.16	14.78	85	36.81	35.89	2000	866.20	844.40
40	17.32	16.87	90	38.98	38.00	3000	1299.93	1266.60
45	19.49	18.99	95	41.14	40.10			
50	21.65	21.11	100	43.31	42.22			

Casing Capacities: Sizes used in Northeastern Kansas Shallow Fields

SIZE—Inch	Weight, Lbs. Per Foot	DIAMETER		Capacity Per 100 Linear Feet	
		I. S. Inch	O. S. Inch	Cubic Feet	Barrels
10	32	10.75	10.192	56.61	10.96
8¼	17	8.625	8.249	37.07	6.61
6¼	13	7.000	6.255	21.35	3.80
5	10	4.886	5.250	13.62	2.32
2	3.71	2.067	2.375	2.32	0.41

Increased volume of air thus begins to blow by the oil causing slippage and releasing a certain amount of gas from suspension with the oil. The oil becomes more viscous and moves slower. A slight water seepage under such conditions will cause the oil to emulsify quickly because of a weakened surface and interfacial tension. The probable influence of some organic acids apparently have the property of increasing the susceptibility of the oil to form emulsions, by further weakening the surface and interfacial tension.

The air will work more and more to the wells with the most permeable sand and decrease in volume to the other wells. Probably there are two reasons for this decrease to the lighter wells. In most sands there are soft streaks called the "pay sand." It is through this pay streak that the major portion of migration takes place. The movement of oil from a reservoir is likened to that of drawing beer from a keg. At first when the keg is opened the beer flows out freely. After the gas weakens the beer has to be drawn out with a pump. Finally, the gas becomes so weak that a vent hole has to be made to admit atmospheric pressure before the keg can be emptied even with a pump. And so it is with the oil reservoir. Some wells will go dead because they apparently become vent holes for the reservoir. The other reason would be a finer and less saturated sand.

Checking the flow of air-gas mixture out of the casing heads of the first affected wells puts a more even keel on the reservoir pressure and will even up the fluid level. It is supposed the attained fluid level is known on each well. From this can be calculated the back-pressure that should be held on a well to maintain such fluid levels, either with a fluid column or pressure on the casing head.

Coefficient for volume in barrels per 100 feet of casing is $.0972 \times D^2$.

Volume in cubic feet is $.545 \times D^2$.

To find the pressure exerted by water or oil at various depths is to determine the weight of the water or oil from the specific gravity per cubic inch and multiply this by the number of feet of the fluid column.

For example:

The weight of water at 60 degrees Fahrenheit is 62.367 pounds per cubic foot, a column of water one foot high and one square foot in area exerts on one square foot of surface a pressure of 62.367 pounds, or .4331 pounds per square inch. At 100 feet in depth a pressure of 43.31 pounds would be exerted. Therefore, to equalize the reservoir pressure on a 100-foot column of water it would be necessary to hold a back-pressure of 43.31 pounds. Or to hold a 43-pound back-pressure on the reservoir with a column of water it would be necessary to set the perforations at 100 feet above the sand.

Capacity tables accompanying this article indicate casing and tubing sizes used in Northeastern Kansas.

If and when the fluid level is adjusted at the wells by means of a fluid column or back-pressure on the well the vent suction on certain wells will be eliminated and under ordinary conditions should return to production if sufficient volume and pressure are exerted against the producing horizon.

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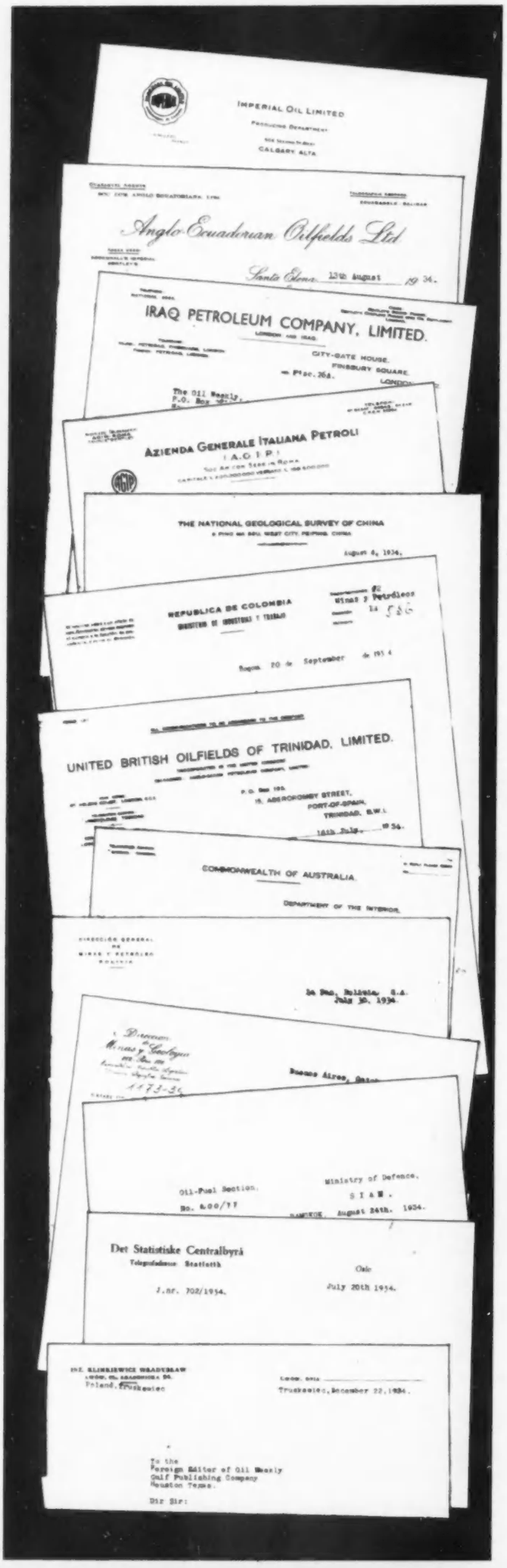

Only through coöperation

is such an undertaking possible

THE coming foreign issue of The OIL WEEKLY, March 18, will be unlike any other foreign issue ever published by The OIL WEEKLY or any other oil publication. Nearly a year of direct effort has been concentrated on this particular number. Thousands of communications have been addressed abroad to develop the information. Special forms, of which you have been sent samples, have been employed.

***Yet*—despite all of this effort on our part the Foreign Issue of The OIL WEEKLY could not possibly have had the value it will have without the close co-operation of those companies, governmental bureaus and individuals abroad whose files contained the necessary information.**

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THE OIL WEEKLY

The response to our efforts has been extremely gratifying:

From **CANADA we have had the aid of the Canadian government and the biggest companies operating there.**

From **MEXICO we have had the complete aid of the government institutions, supplemented by data from individuals.**

From the **BRITISH WEST INDIES have come our information sheets back filled out by the largest producing companies.**

From **CHILE has come extremely interesting data on prospective fields, supplied by the government bureau handling such matters.**

From **CHINA—did you know that China is covered with seepages of oil—has come information which will open the eyes of many, supplied by the director of the National Geological Survey of China.**

From **COLOMBIA has come complete assistance from both the government and the companies operating there.**

From **ECUADOR we have received our information sheets from the principal operators and the government as well.**

From **BOLIVIA we have received from the director general of the department of mines and petroleum (to whom oil companies make complete annual reports) full data, which has been supplemented by private information.**

From **BAHREIN ISLAND, in the Persian Gulf, has come information supplied by the company operating there.**

From **CUBA—where the oil wells produce naphtha—has come data specially prepared for this issue.**

From **AUSTRALIA has come complete available data from the governmental organizations interested in petroleum development —and Australia is very much interested. This data has been supplemented by private information.**

From **VENEZUELA we have had the co-operation of the biggest companies operating there.**

From **ARGENTINA the director general of the department of mines has given data on the entire republic. This has been supplemented by information from private companies.**

From **PERU we have had the assistance of governmental organizations interested in compiling this data, and from the companies operating there.**

From **ROUMANIA has come some very interesting data on 32 districts (the entire Kingdom) from private sources and major companies.**

From **POLAND we have received data on 43 districts from the Carpathian Geological Society. Data on 60 additional fields has been compiled by other sources, including the association of Poland operators.**

From **ITALY—where the government is interested in a wide-spread effort to develop petroleum reserves, has come data from private sources and the government itself.**

From **EAST INDIES, SUMATRA, JAVA, SARAWAK, BORNEO, CERAM, NEW GUINEA, etc., co-operation has come from major companies and from the government.**

From **IRAQ is coming data on one of the world's most interesting areas.**

From **MOROCCO, where the French government is engaged in a desperate effort to develop adequate reserves, has come data from government and individual sources.**

Many other countries, of course, have oil production. Many others have prospects. We have already received data from a large number of countries not specifically mentioned herein and expect to have data from still others as information is still coming in at this time.

Letters from some of these mentioned sources have indicated that as much as one to two months was spent in developing the replies to our questionnaires.

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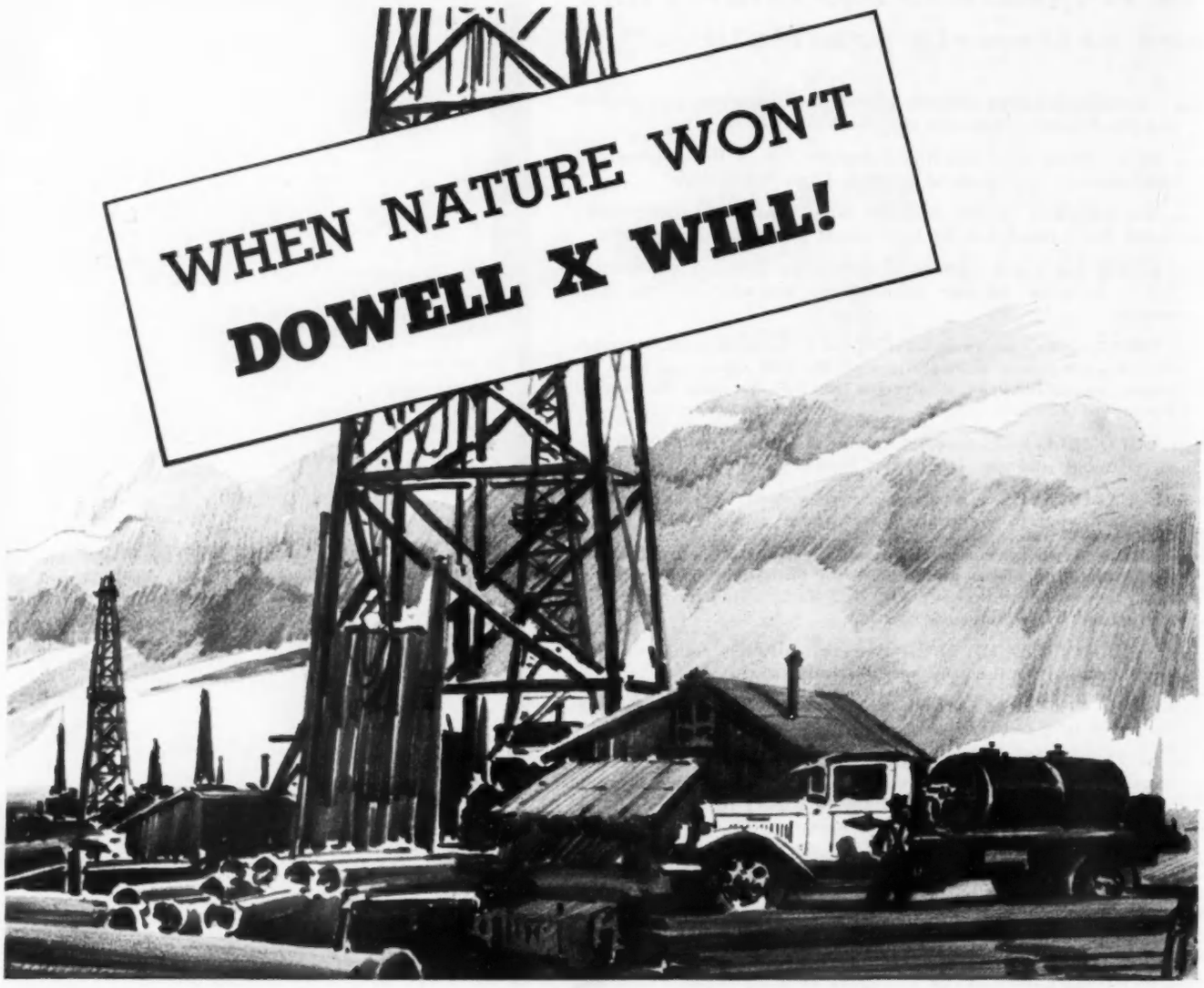

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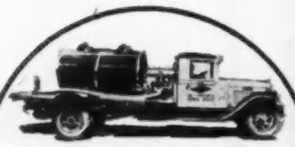

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OIL AND GAS WELL CHEMICAL SERVICE

Efficient Production *Obtained in West Texas by* Tubing Practices

BRAD MILLS
Associate Editor

Small diameter tapered strings keep many weak wells flowing, but each well is an individual experiment

TUBING practices in a number of West Texas fields reflect efforts of operators to keep weak wells flowing, to reduce gas-oil ratios, and to obtain a more efficient production from wells capable of producing little more than their allowables. The action of wells with several tubing combinations has been studied, and in the process many old theories have been discarded and several new theories established.

The wide variety of operating conditions in West Texas fields will not permit a uniform tubing program. Much has been learned concerning the use of tapered strings, small straight strings, and larger straight strings. A number of combinations have been used in a single well during an experimental period, and from these tests the correct type of tubing string often has been determined.

Several conditions affect the performance of tubing in flowing wells. It also has been observed that a number of unusual tubing combinations that proved advantageous in weak flowing wells did not offer distinct advantages in stronger wells. The well affected least by tubing changes is the one that is capable of producing several times its allowable.

For a few years operators were inclined to favor standard tubing practices in all wells in a number of fields, and some even went so far as to introduce a successful program of one field to other fields. Subsequent changes proved that a tubing program applicable to low-pressure fields might not be used successfully in higher-pressure fields. The same difference was found to exist between shallow and deep fields.

Each type of producing well must be considered, but it is not always possible to determine the tubing size required from the action of a well. In a number of fields, wells that performed similarly with large straight tubing strings failed to show the same response to tapered or smaller tubing strings. It was impossible to predict the performance of a weak flowing well through tapered or smaller straight tubing strings.

Small Diameter Tubing

The wide latitude possible with more than half a dozen tubing sizes has given petroleum engineers a chance to prove the performance of various sizes and shapes of tubing combinations. The first experiments were with ordinarily tapered strings and small straight strings. Results in a number of low-pressure flowing fields indicated the advantages of tubing string with small displacements over the larger straight strings.

The theory supporting the use of small tubing strings, both straight and tapered, is that the smaller displacement will not permit the dissolved gas to complete its expansion and break out of solution before it has lifted the oil to the surface. It has been noted in weak flowing wells that much of the gas finds room in large straight tubing to expand and come to the surface ahead of the oil lifted by the gas held in solution. In some types of small flowing wells this expansion and breaking through forms pockets, and tends to retard the flow of the fluid column by forming a kind of back pressure. In gas cap fields the principal flowing energy is derived from the expansion of the dissolved gas. If this expansion is to largely completed in the tubing, the gas will come to the surface and leave the oil behind. The result is a dead well.

The principal objective in changing tubing sizes has been to restore dead wells to production, and to prolong the flowing life of small wells. In a number of very deep wells the aim has been to reduce the gas-oil ratio. Plain tubing with full openings at bottom was used for some time in West Texas fields, but the trend now is toward special seats and bottom connections where one string is run inside a larger string.

A large number of dead wells and several pumping wells have been restored to a natural flow through use of small tapered tubing strings. In most cases the flow has been nominal, but in the case of pumping wells production was greater than on the beam. Both tapered tubing and small straight strings failed to restore the flow in a number of wells in several fields, however, and the practice is far from a remedy for all troubles. Where the formation pressure has not been dissipated and the fluid level is satisfactory, it often is possible to find a tubing combination that will give a natural flow. The Yates, McElroy, Big Lake, Winkler County and Crane County fields have given a wide variety of producing conditions to tubing programs that may be considered as representative of efforts to obtain best flowing results.

Two Tubing Strings

Gulf Production Company has been doing some interesting experimental work, and has been able to restore a natural flow in a number of pumping wells by installing special tubing strings. The gas-oil ratio in these revived flowing wells has been no higher than it was in the same wells while they were on the pump. This company now has about 100 wells producing through tapered tubing strings in a number of West Texas fields.

In running a special adaptation of a tapered tubing string, Gulf Production Company has developed its own combina-

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tion and running method. A string of two-inch tubing is run and equipped on bottom with a special connection and seat. An old working barrel is commonly used on bottom of the two-inch tubing string to form a tapered seat that is 1¾ inches in diameter. This forms a shoulder which is used to receive the bottom connection attached to the smaller tubing string.

After the two-inch tubing string has been run to the desired level, a smaller tubing string, usually a one-inch or a three fourths-inch macaroni string is run inside the larger straight string. This macaroni string is not a full-length flow string, but is run to give the effect of a tapered string. In a representative West Texas well, this smaller string would extend 500 feet upward from the bottom of the two-inch string.

The method of running the macaroni string is simple but effective. The bottom of a standing valve is attached to the bottom of the smaller inside tubing string. This bell-shaped valve wedges into the working barrel on the bottom of the two-inch string and makes an effective seal.

The macaroni string is run on a wire line. A special J-tool that is equipped with a horizontal pin fits into the slot of a slotted nipple on top of the macaroni string. When the small string seats, a sinker bar forces the J-tool into the nipple and causes it to disengage from the slotted nipple. The wire line, sinker bard and J-tool are pulled from the hole and the macaroni string is left in place.

When a one-inch macaroni string is used, it is permitted to rest against the two-inch straight tubing string. When a smaller macaroni string is run and seated in the two-inch string, spring guards are run on the smaller string to hold it in position. These spring guards hold the smaller string in position and do not permit too much "play" inside the two-inch string. The one-inch string is rigid enough to "stand alone" in position, and in addition displaces enough of the two-inch space to prevent a sagging tendency.

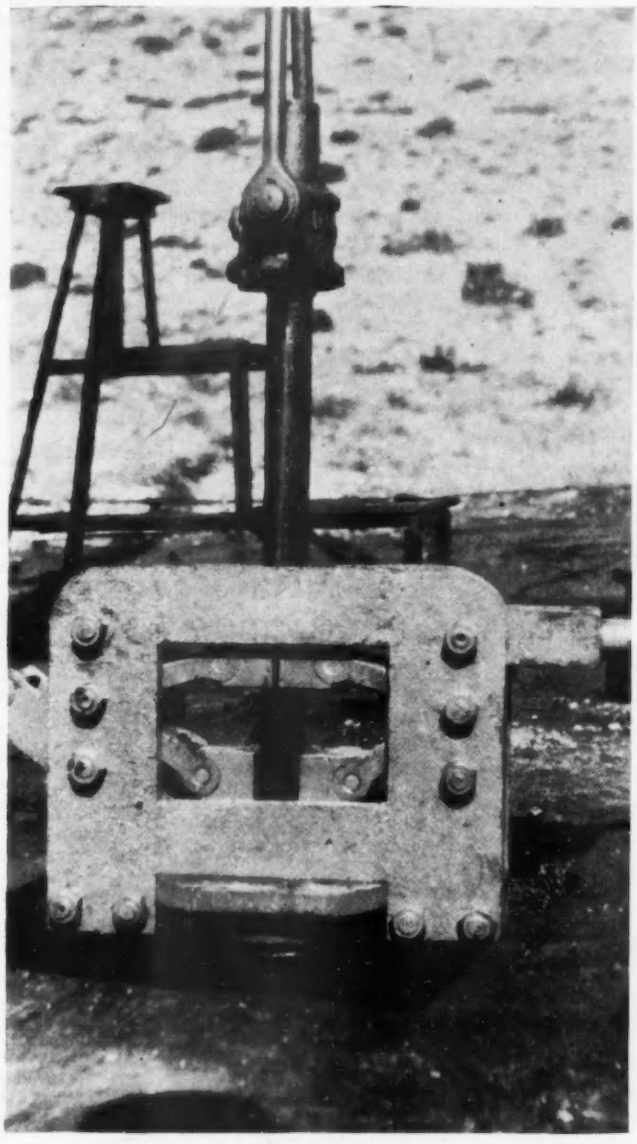
The 500 or 600 feet of one-inch or three fourths-inch inside string, when landed and seated effectively, gives the equivalent of a tapered tubing string. The space between the two-inch and macaroni strings fills up with fluid, and the combination becomes the equivalent of a tapered tubing string composed of a one-inch bottom section and a two-inch top section. This combination will reduce the displacement and expansion of gas enough to restore the flow in many wells that will not flow naturally through large straight strings.

In running macaroni strings inside the two-inch tubing, care must be taken to keep the top of the smaller string below the paraffin level. This level in a few fields is about 1000 feet below the surface. It is obvious that a very small tubing string extending upward to the surface might cause trouble because of its small displacement.

Tubing Packers

In the Big Lake field, Reagan County, Big Lake Oil Company has learned much from its experiments with various tubing combinations. When very deep wells in this field fail to flow satisfactorily, it often is possible to increase the flow through a change in the tubing combination. This field was one of the first to run tubing under pressure, and also has been a leader in running packers on tubing.

The latest practice in the Big Lake field is the running of special packers on large tubing near the bottom of the string. In this field a producing formation at about 8200 feet yields gas and distillate. The top of the main producing formation at about 8600 feet also carries great quantities of gas and water white distillate. Big Lake Oil Company is anxious to shut off this gas and water white



Double acting tubing snubber for running tubing under pressure

distillate, in order that the gas may be conserved and the gas-oil ratio reduced.

The objective in this field is to land the tubing so that the heavy oil found just above the bottom water may be produced, and the upper gas and water white distillate excluded. To do this a rubber composition and lead packer is run on the tubing near bottom. Prior to running the tubing a shoulder is reamed in the producing formation at the level which will place the gas and lighter production above the shutoff. The exact location for this shoulder in the lime is determined by watching the action of the well while drilling in under pressure.

The upper producing formation found at about 8200 feet carries a much lower pressure than the main deeper producing formation. For this reason it becomes necessary to prevent the full pressure from the lower producing formation from coming into contact with the upper gas and distillate zone. Some time ago it was found that a part of the flow from the deep producing zone was finding its way into the upper producing zone. The shallower zone has a reservoir pressure of about 1800 pounds, while the deeper zone has a pressure of more than 3100 pounds.

The great differential in pressure between the 8200-foot zone and the 8600-foot zone makes it impracticable to produce both formations simultaneously in the same well, although the upper formation carries little or no water. By running packers on the tubing, loss of production from the lower formation into the shallower producing formation will be stopped.

The tubing program is tied in with the company's plan to produce the lower formation "from the bottom up." This means that a shoulder will be reamed and a packer set as near the water level as practical. Such a position will result in a production of heavy oil and a low production of gas. After the water table has advanced and the flow becomes unsatisfactory, the hole will be plugged below the shoulder and a higher level in the formation produced. If the packer can not be pulled, the tubing will be backed off immediately above it, and the packer will be made to act as a plug.

After running and setting a packer on a shoulder, a heavy slush is placed around the tubing in the extreme lower portion of the hole. This fills up the hole to a point above the upper portion of the high-pressure producing zone that has been trapped above by the packer and keeps that portion of the formation quiet. It may be possible to bore small holes in the tubing at the level of the upper gas producing zone. This will permit a small quantity of upper gas to break into the flowing column and act as a form of gas lift.

Big Lake Oil Company is working on a plan to conserve the gas now in place in the field. By using packers and producing from the bottom of the lower formation, the reservoir pressure has been brought up to a much higher figure than was shown two years ago. Ordinarily wall packers on tubing were used to advantage before the present program was adopted. Straight 2½-inch tubing strings have been used effectively, but smaller strings have been run inside the larger strings in the weaker wells.

Streaks in the producing formation at Big Lake are extremely tight, and in determining a level for the shoulder it is necessary to choose an effective point immediately above the lowest production. When these shoulders are correctly placed, the packer shutoff is so effective that the upper gas gives no more trouble.

Yates Practices

More tubing combinations have been used in the Yates field than in any other West Texas field. All sizes of tubing from one quarter-inch to 2½-inch strings have been used in efforts to prolong the flowing life of weak wells and to reduce the gas-oil ratio. The early trend toward tapered tubing has not been maintained.

Shell Petroleum Corporation obtained fair results from use of tapered tubing strings, and succeeded in making a few wells flow satisfactorily after they had faltered with the larger straight strings. This company used tubing as small as one fourth-inch in a few tapered strings. Small straight strings also worked to advantage in a few wells.

Stanolind Oil & Gas Company experimented for some time with various tubing combinations, but finally found that small straight strings at Yates were as satisfactory as tapered strings. This company tested one well with several tubing combinations, and was able to reach some

conclusions regarding tubing practices. One well was tested with 2½-inch tubing, and later tested with three or four tapered strings and two small straight strings. The best flow was obtained through a one-inch straight string. A few wells produced more efficiently through small tapered strings, but the advantage over straight strings was slight. In very weak flowing wells, it was possible to obtain slightly better results with tapered tubing strings, since the larger upper portion of the string apparently helped to maintain a more uniform velocity.

The California Company has run different tubing combinations in flowing wells to determine their action under different outlets. Tapered tubing was run in a number of wells, but the average production increase over production through straight strings was slight. Small straight strings offered almost as many advantages as tapered strings.

The net result of experiments at Yates was that strong flowing wells will produce efficiently through straight tubing strings of almost any size, and that the weaker flowing wells will flow best through small tapered or straight strings. Displacement is a factor, and by running a straight one-inch string it often is possible to obtain a flow equal to that obtained through a ¾-inch, one-inch and 1¼-inch tapered string. By holding a suitable back pressure on wells tubed with large straight tubing strings, a satisfactory gas-oil ratio has been obtained. This practice applies to the stronger flowing wells, however.

Only a small quantity of gas is dissolved in Yates oil before it leaves the reservoir. The oil enters the bottom of the hole only because there is a differential in pressure between the hole and the reservoir. This means that at least a small percentage of the gas comes out of solution while forcing the oil from the formation to the hole. This gas must be handled from the bottom of the hole upward, and since it has done its principal work in forcing the oil into the hole from the formation, it does not help much toward forcing the oil to the surface. In very weak flowing wells, the principal lifting force of the gas seems to be spent in bringing the oil into the hole from the formation.

In a number of West Texas fields, operators are experimenting with various tubing combinations with the hope of restoring dead wells to a flowing status and prolonging the flowing life of weak producers. One company placed several wells on the pump before discovering that small tapered tubing strings would restore the flow. Production costs were reduced by more than half after obtaining a natural flow. The wells involved had been producing through larger straight tubing strings.

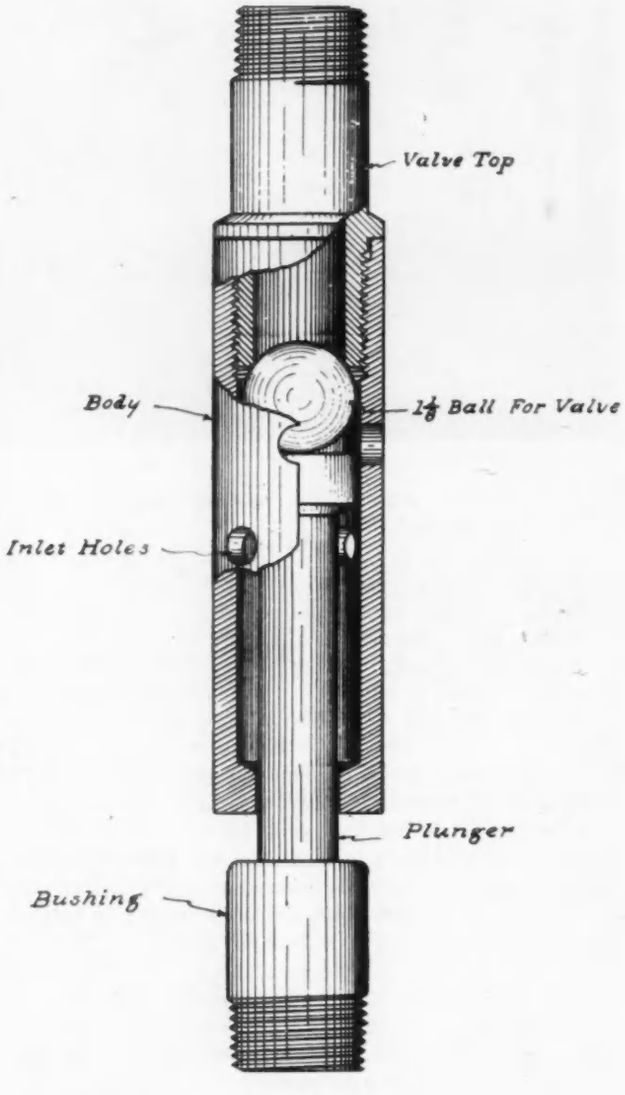
Running Under Pressure

Tubing is being run under pressure in a number of fields, and the practice is no longer a novelty. The accepted method is to run special valves on the bottom of the tubing. The force of the gas keeps the valve closed while running in, but it is a simple matter to open the valve after landing the tubing. One type of valve permits a bottle wedge to drop down as an opening medium. Before pulling the tubing, the wedge is picked up with a tool and seated.

Marathon Oil Company uses a special type of plunger and ball tubing valve. Force of the gas holds a steel ball in a seat while running the tubing. After landing the tubing string, the ball is pushed downward to a point below the gas inlet holes. When it becomes necessary to pull the tubing, the entire string is lowered enough to touch bottom with a bushing. The bushing is attached to a plunger that pushes the ball upward in place above the gas inlet holes. The force of the gas is then upward against the ball. This type of valve is simple and seldom gets out of order.

Accumulation of water in the bottom of a number of low-pressure wells has been the source of considerable trouble. The free water that accumulates gradually shuts off the flow through tapered or very small tubing.

The best effect that can be obtained through use of tapered tubing does not closely approach the theoretically correct taper, but it undoubtedly does increase the flowing power of many small wells. It has been pointed out that a tapered tubing string that follows the well known laws upon which the practice is based would be composed of a top section several feet in diameter. Such a size of pipe is impossible. The chief objective is to use a tubing combination that will give the well a maximum flowing power.



Shown in Closed Position.

Ball and plunger type tubing valve shown in closed position

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Concrete made with LONGHORN "VELO" under normal temperature conditions can safely be placed in use in 24 HOURS. LONGHORN "VELO" is guaranteed to meet and exceed A. S. T. M. specifications for High Early Strength Portland Cement (C 74-30T).

It is NOW available at a small additional cost. Telephone, wire or write us for full information about its advantages and economies.

Facts about Longhorn "VELO"

LONGHORN "VELO" needs no special handling. The concrete is proportioned, mixed, placed and cured as usual, BUT CAN BE PUT INTO SERVICE IN 24 HOURS.

LONGHORN "VELO" is NOT "Quick-setting" Concrete made with LONGHORN "VELO" sets in practically the same time as that made with standard portland cement, but after it has set, IT GAINS ITS STRENGTH MANY TIMES MORE QUICKLY

No admixtures of any kind are required or used with LONGHORN "VELO". There is no change in standard methods other than using one bag of LONGHORN "VELO" in place of one bag of standard portland cement.

It is no longer necessary to wait for days and weeks for concrete to cure. With LONGHORN "VELO", concrete develops working strength in 24 HOURS.

REPUBLIC PORTLAND CEMENT CO.

Manufacturers of "LONGHORN PORTLAND CEMENT"

Offices: SMITH-YOUNG TOWER - SAN ANTONIO, TEXAS

P102

HOWCO Co-axial spiral
CENTRALIZES THE CASING IN WELL
The well of today involves an investment of sufficient size to justify every safeguard that contributes to its successful completion.
This accounts for HOWCO CO-AXIAL SPIRAL.
It is an EXTRA measure of safety. An ADDED assurance of a successful cementing job.
The twofold function of HOWCO CO-AXIAL SPIRAL is to *prevent* direct contact between casing and hole at critical points and to give the cement a "twist" around the casing at those points. Used on surface casing, it provides extra protection against blowouts from shallow gas sands or charged water sands.
Warehoused in Midcontinent, Gulf Coast and California. Full details gladly forwarded on request.
HALLIBURTON OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA
Prevents Direct Contact Between Casing and Wall of Hole
Guides the Cement Around Casing

A simple analysis of the effect of a change in the relative position of the cranks will often enable the operator to eliminate apparent overloads

Back-Side Crank Pumping

W. C. LANE
Electrical Engineer

DURING the last two or three years back-side crank pumping has become prevalent in a number of sections of the Mid-Continent area. As may be implied, the method is an arrangement for operating one or more wells from a back crank on an ordinary standard rig or from one of the different types of geared, V-belt or chain driven pumping units now being marketed. Its first extensive use appears to have been in the East Texas field where it has been the source of much comment. The application is not a new one, but heretofore it was used more or less as a makeshift for operating an occasional well of small production. In a few places it was in extensive use on shallow work prior to this time, but the installations were somewhat crude and have the appearance of being home made.

During the early life of the East Texas field proration was considered to be a temporary expedient. Many rigs were installed that were large enough to lift the unrestricted production of the wells involved with the expectation that proration would be lifted and that competitive pumping methods would ensue. Also, there was much uncertainty as to the water problem and it was felt that sooner or later large quantities of fluid must be lifted. When it became evident that proration was to be a permanent practice and that the water problem would not become acute in the near future, a demand arose for some method whereby the excess capacity of such rigs could be utilized to drive neighboring wells. In reply to this, manufacturers of oil field equipment developed a number of excellent devices and the use of the method came to be regarded as standard practice.

The method especially is adaptable to fields where there is an uncertainty as to the future needs of the wells. Equipment may be installed on the more permanent wells and rod lines extended to edge locations or to others on a structure where the sand is tight and the potential is small. The cost of equipping wells by this method is about the same as that involved in using small pumping units but many engineers feel that the advantage of driving several wells from one large prime mover offsets the advantage of the flexibility of several small units. If, at a later date, any of the wells become too heavy to be operated in this manner much of the apparatus on such wells may be salvaged and separate pumping rigs installed.

An analysis of the system will show that it is simply a method of operating a rig designed for pumping one well as an abbreviated central power. The capacity of the jack operated wells on each system is limited to about the same amount, but it is easier to keep a power balanced when individual wells are hooked off and on by reason of the greater number of wells served. A rig to be operated in this manner is usually placed on a regular well location, but in some cases it is better practice to use a more central point within the group to be served. This makes it more convenient to operate more than one well from both the front and the rear cranks, makes it easier to keep the power plant clean and reduces the fire hazard somewhat.

The usual practice is to attach an auxiliary crank to an extension of the crank shaft and to operate one or more wells from it through the medium of a power take off, pull rods and jacks. A second power take off may be attached to the front crank in case more than three wells are to be carried. In some cases six wells have been attached to the rear crank and one pulled from the beam. It appears to distribute the stresses to a better advantage to divide the load between the front and rear cranks as nearly equal as possible. Obviously, the success of an installation after the settled pumping stage is reached will depend on the ease with which its counterbalancing can be maintained when some of the wells are hooked off. This will be true especially on units operated by electric motors as power peaks due to an unbalanced load are frequently the cause of excessive heating. The salient advantage of the central power is due to the elimination of practically all special counterweighting devices and balancing well against well. It does not appear that in designing some of the existing back-crank installations this feature is being given the emphasis to which it is entitled.

The principle of the power take off devices developed by the different manufacturers appears to be common to all. They differ little except in their mechanical construction and in the refinement of their bearings and other parts. All use either a single push and pull connecting rod or two pull rods in operating more than one rod line from the crank.

The exact type of take off to be used depends on the nature of the ground to be traversed by the rod lines and the method used to support them. Generally, each installation is a separate problem and must be treated as such. It is well to analyze bearing pressures with care before specifying a particular type for it is not uncommon to find that on a particular application on a job one type introduces a useless bearing hazard that may be eliminated by substituting another type.

There are a few simple principles to be observed in locating the front and rear cranks with respect to one another if best operating conditions are to be attained. In pumping a regular beam well and one or more wells from the rear with pull rods, it should be observed that the forces on the front side act in an approximate vertical line while those on the back act parallel to the ground. Hence,

cranks set at 90 or 270 degrees cause these forces to act in phase or in opposition. When operating only one rod line from the back side for the setting indicated in Figure 1 the rear crank should be set as in (a) if one well is used to counterbalance the other. This crank location is necessary in order that the rods on one may be caused to fall during the time those on the other are rising. When the weight on the rig is to be used to counterbalance either well when operated singly, the correct position is shown in (b). Of course, when the rear well is hooked off the weight must be reduced in order to maintain the balance. When each well is counterbalanced separately, it is well to put the cranks 180 degrees apart as in (c) for in so doing, the power impulses are caused to overlap. A simple analogy of this action is that which takes place when the two cranks of a double acting duplex pump are located on the shaft at 90 degrees with respect to one another in order to overlap the power cycles. Assuming an ideal case of freely falling rods, uniform motion and no inertia it can be shown that the peaks are reduced approximately 30 percent.

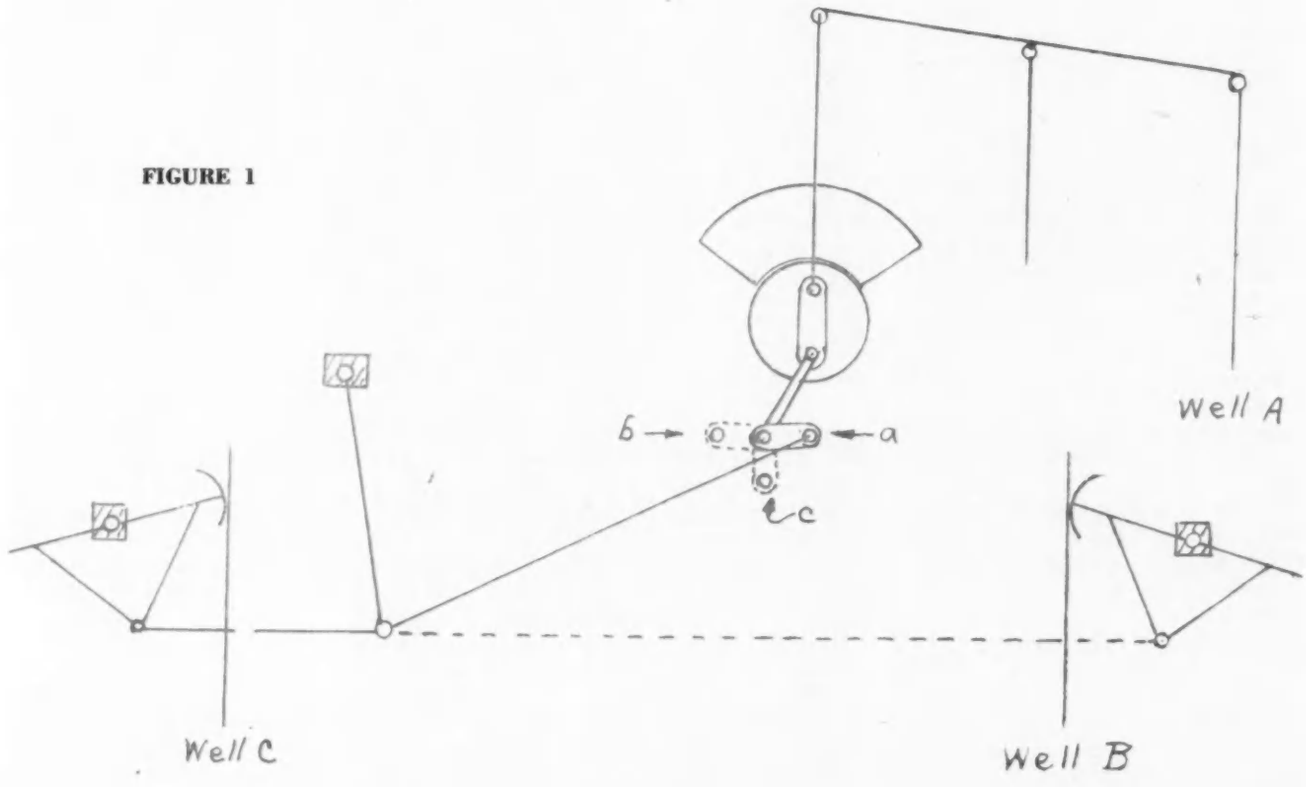
The crank location for operating one beam well and two rear crank wells shown in (a) Figure 1, is faulty from the standpoint of the power supply even though the beam well is balanced correctly and the weights of the two rear wells are identical. It will be observed that the loads on wells A and B are lifted together and the load on well C and the weight of the counterbalance on the beam well together. The result is that there will be two distinct power impulses, though in reality there are six concerned. Those originating in the beam well, two in number, may be caused to overlap the two resultants of the four originating in the two rear wells by setting the cranks at (c) 180 degrees.

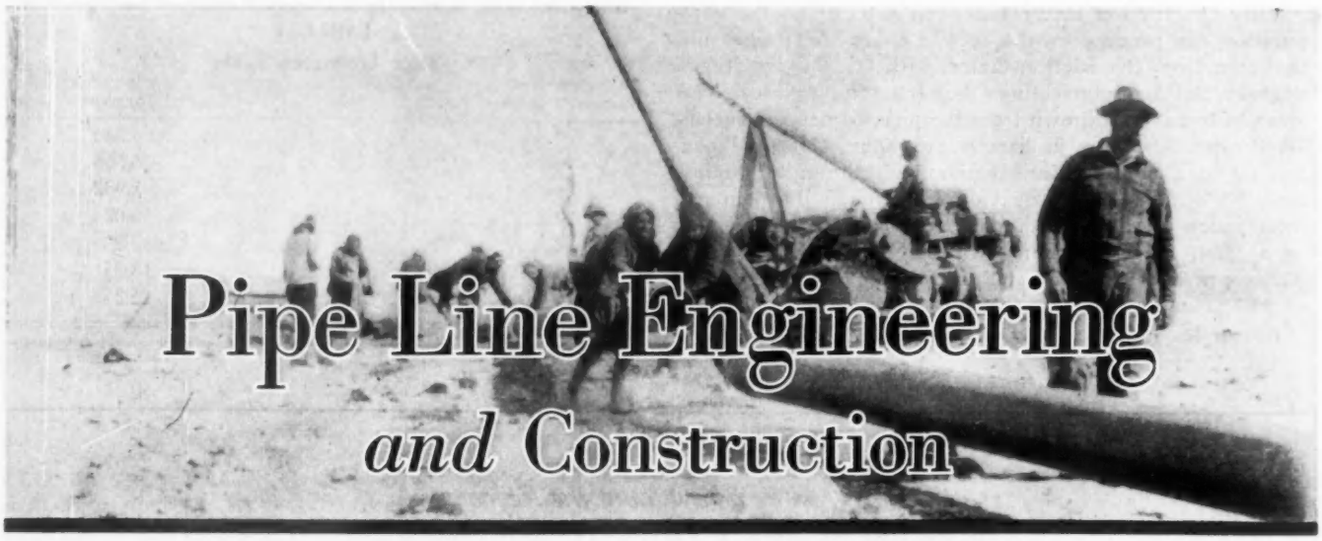
It seems reasonable to think that any combination that will reduce power input peaks will also reduce the stresses acting in the mechanical parts. If it is the intention to utilize the balance on the beam well while operating the front crank well or only one of the rear wells, an analysis will show that the crank setting shown in (a) offers the greatest number of possibilities, but it is not universal and will not take care of all cases arising.

When two or more wells are operated with power take offs from both the front and the rear cranks it seems obvious that since all forces are acting in a horizontal direction the cranks should be located at 90 degrees with respect to one another as this will cause the power cycles to overlap. The failure to observe this precaution will be much more noticeable when operating the unit with an electric motor whose capacity is about equal to the load on it than when using a gas engine having much flywheel action. As was intimated above, a motor that will overheat when subjected to a given load that presents high-power peaks during the cycle may carry the same load with ease when the operation of the different wells are timed correctly by shifting the relative position of the cranks. It appears that a crank so arranged that the angle may be varied slightly from 90 and 180 degrees will be of some assistance in reducing pulsations of power to a minimum.

From the consideration this method is receiving and the number of installations that have been made within the last three years it would seem that manufacturers should continue to make improvements on the devices involved. The greatest need at this stage appears to be a counterbalance whose effect can be transferred from well to well as needed. It appears that under the conditions imposed by proration, low revenues and the mounting lifting costs that there is a broad application for the method. It has always seemed to the writer that the custom of equipping a poor well with as expensive apparatus as is used on the better wells is economically wrong. Possibly this method of driving the inferior wells is one way to avoid this safe but questionable practice.

FIGURE 1





Pipe Line Engineering *and* Construction

Nomographic Charts *for Determining the Fluid Friction* in Pipe Lines

H. V. BECK

Assistant Professor, School of Mechanical Engineering, The University of Oklahoma

THESE charts, described in this article, are for the determination of the frictional resistance to a fluid flowing in a pipe line. They are of the same type as those published in a recent issue of THE OIL WEEKLY and have the same distinct advantages listed in that article. In the article referred to, "Nomographic Charts for Measuring Flow of Viscous Fluids," THE OIL WEEKLY, January 21, 1935, it was explained that the coefficient of a differential producing meter was a function of the Reynolds Number corresponding to the conditions of flow. This criterion—the product of the diameter in feet, the velocity in feet per second, and the reciprocal of the kinematic viscosity—has been found to be the ideal coordinate for graphing the friction factor of a pipe line. When plotted against this coordinate, a single curve represents the variation of the friction factor for any fluid, liquid or gas.

THE friction factors shown on these charts are from the authoritative data assembled by Stanton and Pannell and published in the Collected Researches of the National Physical Laboratory, London. Their research was with smooth walled brass pipe and consequently yielded lower friction factors than those found by other investigators whose apparatus consisted of commercial pipe of small diameter. Obviously, the frictional resistance would be greater within the rougher walls of small diameter commercial pipe. This surface roughness of the pipe is, however, a relative thing and is of decreasing importance as the diameter becomes larger. For pipes of the diameters commonly used for the transportation of crude oils, the friction factors are practically identical with the factors for smooth walled pipe.

In order to explain the use of the charts, the following illustrative problem will be considered. Determine the pressure drop per mile in a 10-inch line caused by a flow of 1150 barrels per hour. The fluid has a gravity of 38 degrees A.P.I. and a viscosity of 62 Saybolt seconds.

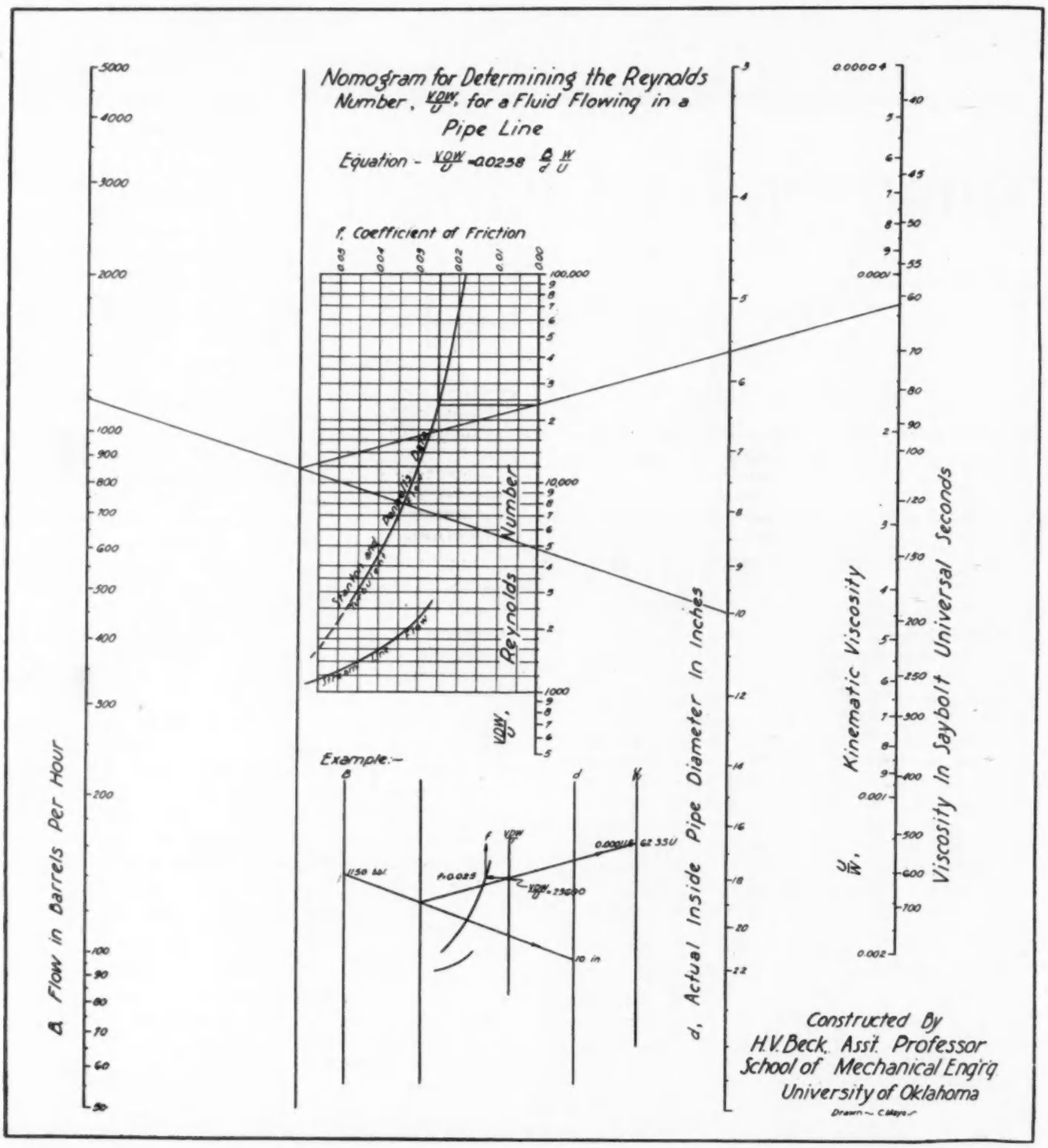
In order to determine the friction factor it will be necessary to ascertain the Reynolds Number corresponding to the flow conditions. This value is obtained from the first chart in the following manner. A straight line is drawn from the flow in barrels per hour, 1150, to the pipe diameter in inches, 10, intersecting the intermediate dummy scale. From this point of intersection, a straight line is drawn to either of the coincident viscosity scales, 62 Saybolt seconds or its equivalent, a kinematic viscosity of 0.000116. The intersection of this line with the Reynolds Number scale indicates the criterion of flow. The Reynolds Number scale is used as a coordinate of the friction factor graph. For the illustrative example, the Reynolds Number is 23,600 with a corresponding friction factor of 0.025.

After the friction factor has been determined the computation can proceed on the second chart. A straight line is drawn from the friction factor, 0.025, to the gravity, 38 degrees A.P.I., intersecting the left dummy scale. A straight line is next drawn from the pipe diameter in inches, 10, through the flow in barrels per hour, 1150, and continuing to a point of intersection with the right dummy scale. A straight line is next drawn through the points of intersection on the two dummy scales and continuing on to a point of intersection with the pressure drop scale. This point indicates the solution, a required pressure drop of 9.62 pounds per square inch per mile.

It can be seen that the pressure drop varies inversely

TABLE 1
Pipe Diameter Table

Nominal Diameter, Inches	Actual Diameter, Inches
4	4.026
6	6.065
8	7.982
10	10.02
12	12.00
14	13.25
16	15.25


Nomogram for Determining the Reynolds Number, $\frac{VDW}{U}$, for a Fluid Flowing in a Pipe Line
Equation - $\frac{VDW}{U} = .0238 \frac{Q}{d} \frac{W}{U}$
f, Coefficient of Friction
Reynolds Number
$\frac{VDW}{U}$
Example:-
Q, Flow in Barrels Per Hour
d, Actual Inside Pipe Diameter In Inches
$\frac{U}{W}$, Kinematic Viscosity
Viscosity In Saybolt Universal Seconds
Constructed By
H.V.Beck, Asst. Professor
School of Mechanical Engrg
University of Oklahoma

COMMODITY EXCHANGE, INC.

announces the inauguration of trading in

GASOLINE AND CRUDE OIL FUTURES

on TUESDAY, MARCH 5th, 1935

GASOLINE CONTRACT

CONTRACT UNIT:

42,000 United States gallons on the basis of measurement at 60 degrees Fahrenheit. Each contract unit must be made up exclusively of one of the deliverable grades specified in the By-Laws.

DELIVERABLE GRADES:

BASE GRADE (Exchange Grade No. 1): United States Motor Gasoline as per Federal Specification VV-G-101, within the range of 55-59 Octane numbers.

OTHER DELIVERABLE GRADES: Exchange Grade No. 2: Motor Gasoline as per Federal Specification VV-M-571, within the range of 60-64 Octane numbers, at ¼ of one cent per gallon premium above the contract price. Exchange Grade No. 3: Motor Gasoline of the same specification as Grade No. 2, with Octane numbers 65 and above, at ½ of one cent per gallon premium above the contract price.

DELIVERIES:

From storage tanks licensed by the Exchange in the Houston-Galveston area, Texas, at the contract price, and at the Port of New York at a premium of 5/16 of one cent per gallon above the contract price. A tolerance of 2% above or below contract unit is permitted.

QUOTATIONS:

Prices will be quoted in respect to the Base Grade, No. 1. Price fluctuations will be in multiples of one one-hundredth of one cent per gallon.

PRICE FLUCTUATION LIMITATIONS:

Trades for future delivery in any month shall not be made during any one day at prices varying more than one cent per gallon above or below the lowest price of the closing range for that month during the preceding business session on the Exchange.

MONTHS TRADED:

At the beginning trading will be conducted in contracts for delivery during June, 1935, and the eight subsequent months. On and after June 1st, 1935, trading will be conducted in contracts for delivery during the current month and the succeeding eleven calendar months.

TRADING HOURS:

From 10 A. M. to 3 P. M. on each business day with the exception of Saturday, when trading shall cease at 12:00 noon.

COMMISSION RATES:

(U. S. and Canada). Based upon a price per gallon.

(Per contract bought or sold)

	Members	Non-Members
Below 6c	$ 6.25	$12.50
From 6c to 7.99c incl.	7.50	15.00
" 8c to 9.99c "	8.75	17.50
" 10c to 13.99c "	10.00	20.00
14c and above	12.50	25.00

Outside the United States and Canada, a charge equal to the actual cost of cables with a minimum charge of $1.25 shall be added to the above rates.

CRUDE OIL CONTRACT

CONTRACT UNIT:

2,000 barrels of 42 United States gallons each on the basis of measurement at 60 degrees Fahrenheit. Each contract unit must be made up exclusively of one of the deliverable grades specified in the By-Laws.

DELIVERABLE GRADES:

BASE GRADE: Mid-Continent (Oklahoma and Kansas origin) 36.0-36.9 A. P. I. gravity.

OTHER DELIVERABLE GRADES: Texas, Mid-Continent and California oils, as specified in Section 353 of the By-Laws (the term "grade" covering both the characteristics of point of origin and A. P. I. gravity).

DELIVERIES:

From storage tanks licensed by the Exchange and located in the Houston-Galveston area, Texas, or in the Cushing-Drumright area, Oklahoma; at premiums above or discounts below the contract price, depending upon the grade delivered and the point of delivery (See Sec. 353 of the By-Laws). A tolerance of 2% above or below contract unit is permitted.

QUOTATIONS:

Prices will be quoted in respect to the Base Grade. Price fluctuations will be in multiples of one-quarter of one cent per barrel.

PRICE FLUCTUATION LIMITATIONS:

Trades for future delivery in any month shall not be made during any one day at prices varying more than 30 cents per barrel above or below the lowest price of the closing range for that month during the preceding business session on the Exchange.

MONTHS TRADED:

At the beginning trading will be conducted in contracts for delivery during June, 1935, and the eight subsequent months. On and after June 1st, 1935, trading will be conducted in contracts for delivery during the current month and the succeeding eleven calendar months.

TRADING HOURS:

From 10 A. M. to 3 P. M. on each business day with the exception of Saturday, when trading shall cease at 12:00 noon.

COMMISSION RATES:

(U. S. and Canade). Based upon a price per barrel.

(Per contract bought or sold)

	Members	Non-Members
Below $1.50	$ 6.25	$12.50
From $1.50 to $1.99¾ incl.	7.50	15.00
" $2.00 to $2.49¾ "	8.75	17.50
" $2.50 to $2.99¾ "	10.00	20.00
$3.00 and above	12.50	25.00

Outside the United States and Canada, a charge equal to the actual cost of cables with a minimum charge of $1.25 shall be added to the above rates.

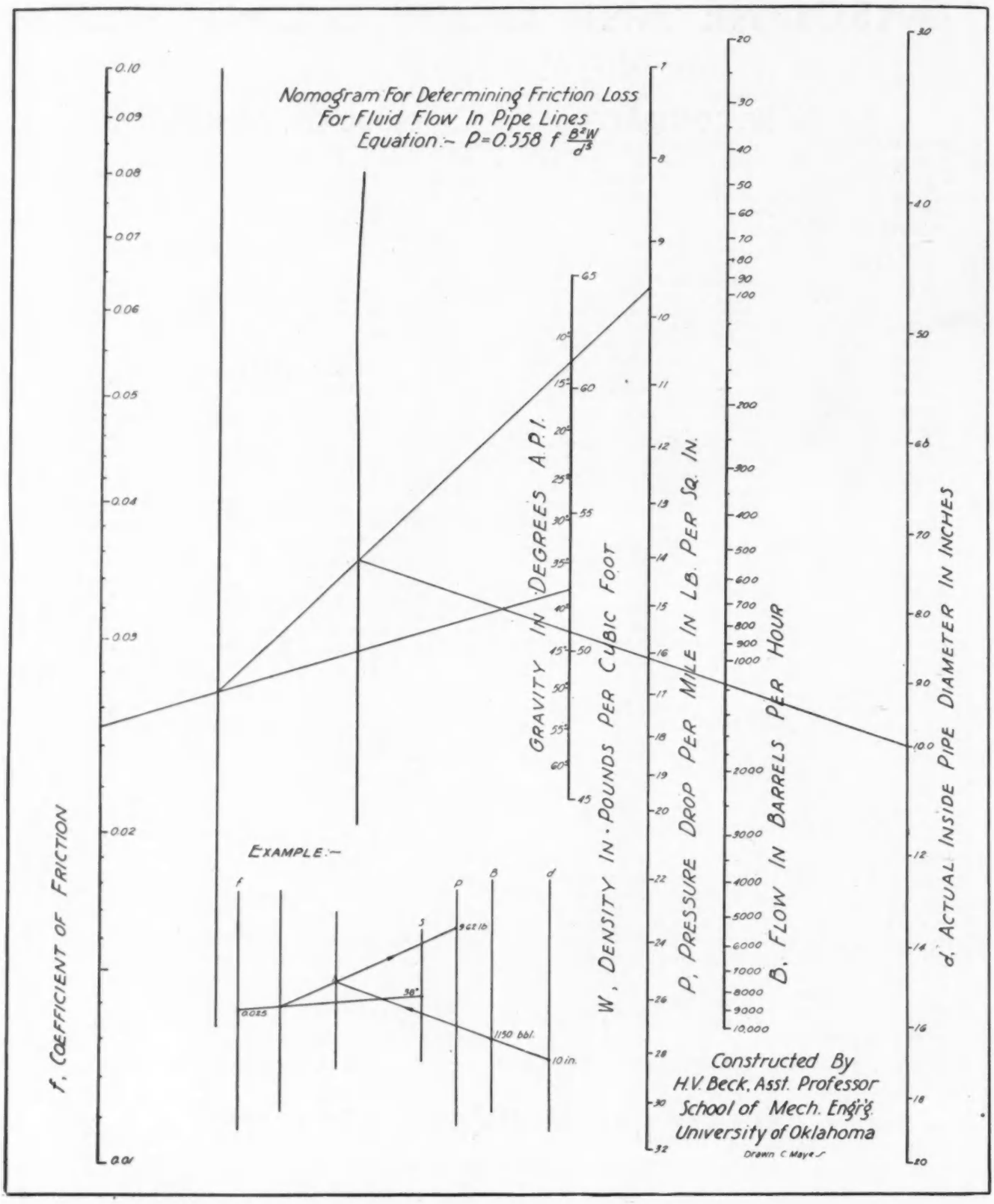
FOR FURTHER INFORMATION APPLY TO THE SECRETARY'S OFFICE

COMMODITY EXCHANGE, INC.

81 BROAD STREET, NEW YORK CITY

as the fifth power of the diameter. Because of this it is quite necessary that the actual inside pipe diameters be used. To illustrate this variation and to facilitate use of the chart a few of the most common values are listed in Table 1.

In the above illustrative example the manipulations necessary for the solution have been made in a definite order. It is obvious, however, that the calculations may be made in any order, the order depending upon which of the factors are known. It is often necessary that a "cut and try" method be employed; but this method, under those conditions, would be necessary regardless of whether charts or the basic equations were used.



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SKF *Spherical Roller Bearings*

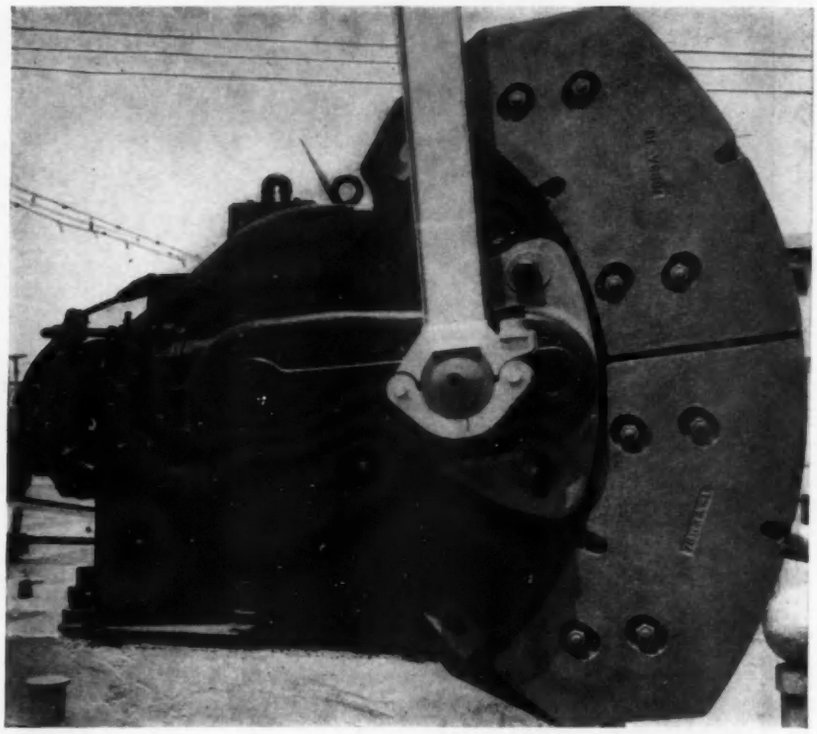
PROVIDE STAMINA

For Heavy Duty in the Oil Fields

● SKF makes practically *all types of anti-friction bearings.* When SKF recommends a particular type of bearing, therefore, you may depend upon it; its recommendations are *unbiased!*

SKF
BALL AND ROLLER BEARINGS

3368



SKF-Equipped Built By The Intern'l Derrick & Equipment Co.

THE BIG SWING to SKF in the oil fields is due to the fact that manufacturers *know* that rugged SKF Bearings give ample capacity for the heaviest drilling or pumping service. They *know* that SKF provide the kind of bearing performance upon which all equipment should depend.

Therefore, there was a good reason why Ideco insisted upon SKF Spherical Roller Bearings when they *modernized* this Design "R" Pitman Wrist Pin. They knew SKF offers a construction superior to straight roller bearings mounted in a conventional type self-aligning housing... need no adjustment... and stand up for years without showing wear. And they made a housing to protect SKF from dirt and water... to retain lubricant for long periods. Small wonder, then, that users endorse this pitman and its bearings! Swing to SKF, too! SKF INDUSTRIES, INC., Front St. & Erie Ave., Phila., Pa.

FOREIGN DEVELOPMENTS AND TECHNOLOGY

144 Wells Completed in Mexican Fields During 1934

MEXICO completed 144 wells in 1934 to obtain 57 producers and 87 failures. Aggregate initial production of the producers was 33,777 barrels, sufficient to give the country a total output of 38,171,946 barrels of oil during the year. According to calculations of the department of petroleum of the national economy, this production had a value of 127,159,475 Mexican dollars.

Government figures prepared for publication in THE OIL WEEKLY show the daily average production per well in Mexico during November was 104.54 barrels, a rather high figure when compared to average well production in the United States of America.

Light oil fields of Mexico continue to furnish the bulk of production there, being credited in November, 1934, with 2,408,604 barrels out of the nation's total of 3,332,926 barrels produced.

The following three tables, furnished by Mexico's department of petroleum, show wells completed in Mexico during 1934, production of oil by months in 1934, wells producing in various light and heavy oil fields in November, 1934:

Wells Completed in Mexican Fields in 1934

MONTHS	PRODUCERS		FAILURES				Total No. of Finished Wells
	No. of Wells	Initial Daily Production (Barrels)	Dry Holes	Unfinished Wells	Salt Water Wells	Total Failures	
January	6	4,969	3	..	1	4	10
February	3	780	7	1	2	10	13
March	1	151	4	..	4	8	9
April	6	780	5	..	2	7	13
May	7	2,195	3	..	4	7	14
June	6	1,025	2	..	7	9	15
July	4	1,252	4	..	5	9	13
August	10	4,950	2	..	3	5	15
September	1	2,724	3	..	4	7	8
October	5	6,032	3	..	5	8	13
November	3	3,642	5	..	1	6	9
December	5	5,277	3	..	4	7	12
TOTAL	57	33,777	44	1	42	87	144

Wells in Operation in Mexican Oil Fields, During November, 1934

	No. of Wells Producing	Total Oil Produced in November Barrels	Daily Average Production Barrels	Daily Production Per Well Barrels
HEAVY CRUDE FIELDS				
Altamira	8	15,970	532.32	66.55
Ebano	104	213,149	7,105.00	68.31
El Limon	33	23,292	776.37	23.52
Cacalilao, (Banuco)	149	302,027	10,067.59	67.55
Panuco (Diversos)	255	334,307	11,143.55	43.72
Topila	52	28,356	945.20	18.18
San Geronimo	3	5,718	190.59	63.53
San Sebastian	1	1,503	50.13	50.13
TOTAL	605	924,322	30,810.75	50.95
LIGHT OIL FIELDS				
Comales	3	755	25.16	8.37
Dos Bocas	1	2,032	67.68	67.68
Chiconcillo-San Miguel	9	9,334	311.17	34.60
Tepetate-Chin-Amat-Zacamixtle	102	289,220	9,640.68	94.54
Toteco y Cerro Azul	40	297,504	9,916.81	247.95
Moralillo	1	314	10.44	10.44
Tierra Amarilla	8	3,447	114.92	14.34
Alazan	2	17,128	570.94	285.50
Potrero del Llano	9	66,800	2,226.66	247.39
Cerro Viejo	12	38.187	1,272.91	106.05
T. Blanca-Chapapote-Alamo	38	274,892	9,163.08	241.16
Jardin	5	5,988	199.58	39.94
Paso Real	28	36,507	1,216.93	43.46
Mecatepec	3	3,296	109.82	36.61
Poza Rica	5	462,164	15,405.47	3,081.09
Furbero	9	4,447	148.26	16.48
Tonala	105	338,276	11,275.90	107.37
El Plan	27	491,960	16,398.66	607.36
Filisola	51	66,353	2,211.75	43.34
TOTAL	458	2,408,604	80,286.82	175.30
GRAND TOTAL	1,063	3,332,926	111,097.57	104.54

Production of Crude Oil in Mexico, During 1934

MONTHS	Barrels	Value in Mexican Dollars
January	3,113,707	9,678,568.00
February	2,863,088	8,899,110.00
March	3,188,923	10,108,820.00
April	3,206,491	10,447,298.00
May	2,714,827	8,956,955.00
June	2,918,793	10,030,472.00
July	3,303,055	11,322,947.00
August	3,434,516	11,771,113.00
September	3,276,612	11,227,074.00
October	3,393,694	11,616,342.00
November	3,332,926	11,391,393.00
December (Preliminary calculation)	3,425,314	11,709,383.00
TOTAL	38,171,946	127,159,475.00

Ploesti May Furnish Natural Gas to Bucharest

Construction work is expected to start in the spring of 1935 on a gas pipe line from Ploesti to Bucharest, Roumania, according to Harold D. Clum of Bucharest, who also states the natural gas will supplant gas manufactured from coal for domestic consumption in Bucharest.

Distribution of gas within the city will be handled by the municipality, according to a preliminary contract between the municipality and the companies which will transport gas from the field to the city. Incidentally, it is understood the companies supplying the gas will also finance construction of the line.

Gas and Electricity Company, a private organization having at present the monopoly of gas, electricity and water supply in Bucharest, is reported considering installation of a distribution system.

Text of Newly Proposed Federal Petroleum Act To Regulate Commerce and for Other Purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

Declaration of Policy

Section 1. Excessive supply injuriously affects commerce in petroleum among the several States and with foreign nations. Besides the results usually coincident with excessive supply and, in addition to distress sales and dumping, the effect here is to render unprofitable the operation of wells of small but settled production and cause their abandonment before the maximum economic yield is obtained, thereby causing waste of an exhaustible natural resource essential to the national defense. Premature extraction of petroleum from the natural reservoir, induced by the absence of restrictions upon the quantity which may move in commerce, results also in other wastes and inferior uses. To remedy such evils and properly to regulate and coordinate commerce in petroleum among the several States and with foreign nations, it is essential that restrictions be placed upon the quantities which may move in commerce when excessive supply exists, and that fair and equitable apportionment be made among the States and among the different sources of supply. This commerce, a large portion of which is interstate or foreign, is found to be of such nature that any regulation herein contemplated, to be effective and fair, must regard all commerce in crude petroleum as a unit and establish quotas therein, without regard to the fact that some transactions may occur within the States, since they affect, if they are not part of, commerce among the several States and with foreign nations.

Federal Petroleum Board

Section 2. There is hereby created the Federal Petroleum Board, to be composed of five members. The Secretary of the Interior shall be a member and chairman of the Board. The other four members shall be appointed by the President, at least three of them from nominations made by trade associations within the industry, for terms concurrent with the term for which the President is elected, and they shall hold office respectively until their successors are chosen and qualify. Each of the four shall receive compensation at the rate of $12,000 per annum. The Board shall appoint, without regard to the civil service laws, such qualified and trained employees as may be necessary in carrying out the purposes of this Act, and their compensation shall be fixed in accordance with the Classification Act of 1923, as amended. The scientific and professional employees of the Board shall be selected solely upon the basis of their scientific or professional qualifications. The Board from time to time shall elect a vice chairman to act in the absence of the chairman.

Investigation and Reports

Section 3. The Board is authorized and empowered, when, in its judgment, it is necessary to effectuate the purposes of this Act, to make investigations and collect data from the industry, and to this end it may require periodical and special reports from persons engaged in the petroleum industry, and may examine and inspect their books, records, papers, and properties for the purposes of verifying such reports and ascertaining the facts.

Cooperation with Other Bodies

Section 4. The Board may cooperate with executives, officials, and agencies of the States in the study and investigation of matters relating to the petroleum industry and may hold joint hearings upon such matters with any duly authorized State agency. The Board when participating in any such joint hearing shall have all the powers enumerated in Section 13.

The several departments and bureaus of the United States Government shall at the request of the Board provide it with all records, papers, and information which they may have available pertaining to the petroleum industry.

Imports

Section 5. The Board shall limit the importation of petroleum and its products, including natural asphalt, to such quantities as will prevent imports of petroleum and its products, including natural asphalt, from interfering with current domestic production by supplying an undue proportion of domestic consumptive and export demand for petroleum and its products, including natural asphalt.

The four quarters of the calendar year shall be reckoning periods. To the end of 1940, and thereafter until otherwise ordered by the Board, the allowed rate of imports of crude petroleum and the products of crude petroleum, all combined and including natural asphalt, in barrels total for any reckoning period of three calendar months, shall be 13.53 percent of the quantity of crude petroleum, determined under Section 6 to be the demand for consumption in the United States and the demand for export from the United States during the first month of such reckoning period. Crude petroleum or products thereof imported and supplied to vessels at American ports shall be deemed imports, excepting bunker fuel oil for vessels engaged in foreign trade.

In advance of each reckoning period the Board shall hold a hearing, consider applications for quotas, make fair and equitable allocations, and establish, within the limits herein fixed, just and reasonable quotas of crude petroleum and the various products thereof, including natural asphalt, for persons desiring to import the same during the period, in proportion to their proven trade or manufacturing demand for such imports, over and above their customary and available domestic supply, if any.

Quotas of particular products shall not be allowed to such extent as will, on the whole, increase the normal importation ratios of such products to the aggregate of crude and other products imported, except when the Board finds a shortage in the domestic supply of such particular products, and should the allowed ratio of crude petroleum, fuel oil, gas oil, paraffin and asphalt, in aggregate barrels, to all other products of petroleum allowed to be imported, fall below the average ratio which prevailed in the last six months of 1932, each barrel excess of such other products having a boiling point below 400 degrees Fahrenheit shall be deemed the equivalent of three barrels for the purpose of computing total allowable imports. Should the allowable crude oil production for the United States for any quarter be larger or smaller proportionately than that amount fixed for the first month of any quarter or should there be an overage or shortage of actual imports in comparison with the allowable imports in a quarter, as determined on above basis, such differences shall be adjusted up or down in subsequent quarters, and the final ratio of imports to such demand for consumption in the United States and the demand for export from the United States, reduced to a monthly basis in each instance, shall be 4.51 percent to the end of 1940 and thereafter until otherwise ordered by the Board. Nothing herein stated shall prevent the importation of products with a boiling point above 400 degrees Fahrenheit or crude oil in different ratios to the aggregate than those which prevailed in the last six months of 1932.

Under appropriate rules and regulations, the Board may permit imports in bond for export, including manufacture in bond and including oil imported under a drawback application coupled with export of resultant products, and such imports shall not be charged against import quotas or included in computations under Section 6.

When quotas are in effect under this section it shall be unlawful for any person, except as otherwise herein provided, to import into the United States crude petroleum or any product thereof in excess of his quota or without having been assigned a quota under this section.

No tariff, duty or excise tax now in force shall be affected by the provisions of this Act.

Ascertainment and Apportionment in United States

Section 6. The Board shall periodically, upon fair and impartial consideration of pertinent data, determine the demand for consumption in the United States and the demand for export (exclusive of exports from imports in bond) from the United States for petroleum in the United States and the products thereof. Using such determination, or so much thereof as may be applicable, as a basis, the Board shall then determine the just and reasonable portion of such demand for crude petroleum from each producing State; and, if found necessary by the Board for the purpose of carrying out the purpose and provisions of this Act, the Board shall likewise determine the just and reasonable portion of such demand for crude petroleum from any or every pool, field, lease, property, storage unit, or other source of supply within the State.

Interstate Compacts

Section 7. The consent of Congress is hereby given for any two or more petroleum producing States to enter into agreements or compacts from time to time for the conservation of their petroleum resources and the restriction of crude petroleum production, subject to the condition that the total allowed production for the signatory States combined shall coincide with the total demand for such production, as determined under Section 6.

Limitation Upon Fixing Quotas

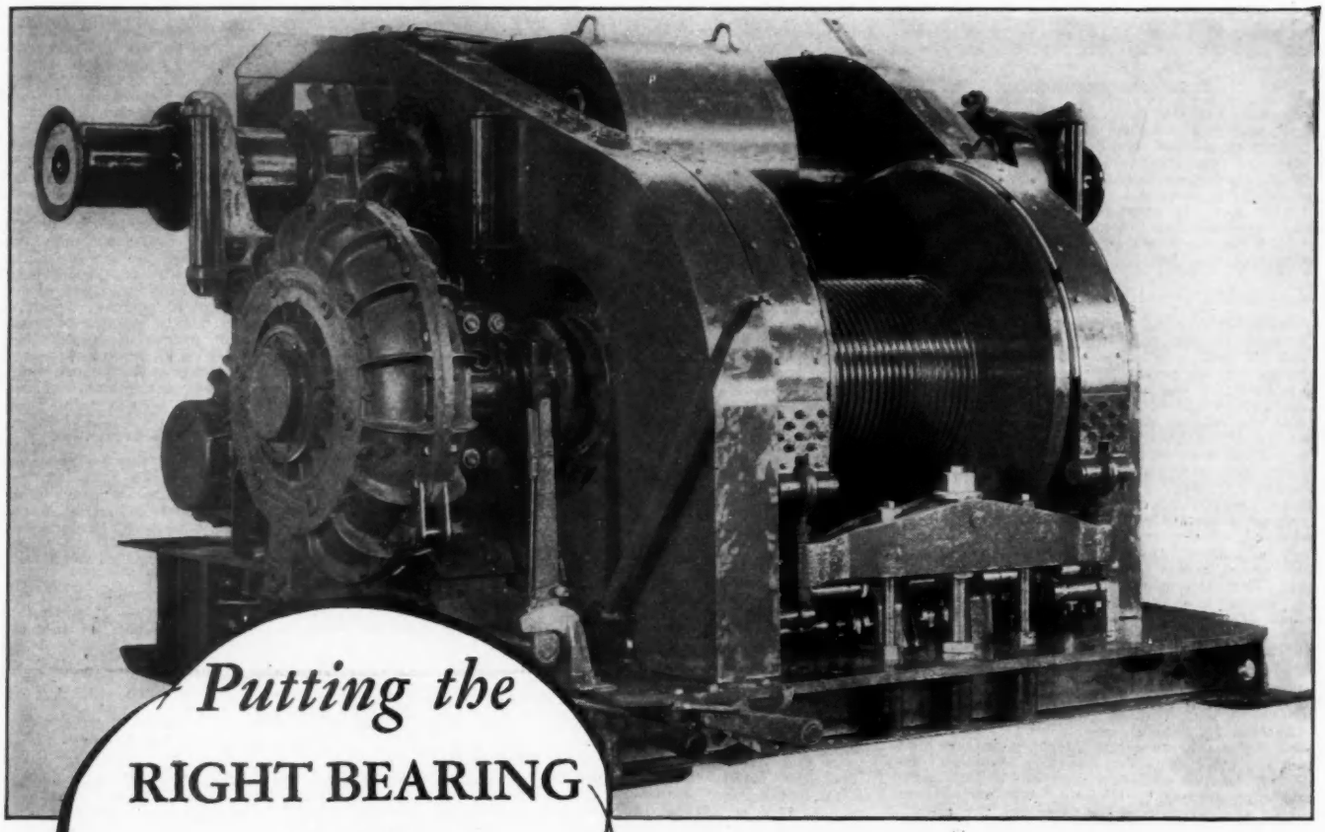
Section 8. Whenever and so long as the production of crude petroleum in any State, through agreement or compact, or through orders of State authorities, or otherwise, is kept within the demand for production from such State, as determined under Section 6, no quotas shall be fixed under this Act for pools, fields, leases or properties within such state. In event two or more States shall be under agreement or compact restricting their production of crude petroleum, as authorized in Section 7, the total production of the signatory States combined must exceed the total combined demand for such States, as determined under Section 6, before quotas shall be prescribed for pools, fields, leases or properties within any such State.

Quotas in Commerce

Section 9. When, and only when, but as often as, the production of crude petroleum in any State exceeds the demand therefor, as determined under Section 6, but always subject to the provisions of Sections 7 and 8, the Board shall prescribe quotas of crude petroleum for movement into commerce, in such manner and to such extent as will limit the total movements into commerce to the demand for consumption in the United States and the demand for export, as determined by the Board, and shall prescribe such quotas of crude petroleum from such States, pools, fields, leases, properties, storage units, or other sources of supply as it may find to be necessary to effect such national limitation. The quota prescribed for any such source of supply shall be equal to its just and reasonable portion of total demand as determined under Section 6. And it shall be unlawful for any person to place or receive in commerce (export, interstate or intrastate), by sale, purchase, exchange, consignment, transportation or otherwise, any crude petroleum in excess of quota so prescribed, or any product derived in whole or in part from such crude petroleum, with knowledge or reasonable ground to believe that the quota is being or has been exceeded; and this inhibition shall include placing or receiving in such commerce any product of crude petroleum if the crude petroleum itself, being in excess of quota, could not have been placed in such commerce lawfully and directly. If found necessary to accomplish the purposes of this Act, the Board may require crude petroleum produced in excess of quotas in commerce to be stored and the storage sealed or bonded. In every case exportation shall be deemed placement in commerce.

Certificates of Clearance

Section 10. To make effective the restrictions and quotas established under this Act, the Board may prescribe and require certificates of clearance for crude petroleum in such areas and at such times as may be deemed necessary, under appropriate rules and regulations, and while such orders of the Board are in effect no person shall receive or transport crude petroleum to which such orders apply without appropriate certificate of clearance. Wherever such certificates are required by the Board, and any crude petroleum is refined or processed without first having moved in commerce under an appropriate certificate, it shall be unlawful to place any products thereof in commerce without furnishing a certificate of clearance, or for any person to receive or transport such products knowing them to have been derived in whole or in part from crude petroleum which has not moved in commerce under an appropriate certificate of



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clearance, or for which a certificate of clearance for such products has not been furnished.

Rules and Regulations

Section 11. In the administration, enforcement, and interpretation of this Act, the Board is authorized and empowered to make such rules and regulations, in addition to those specifically provided for in this Act, as may be reasonably necessary to carry out the purposes of this Act. It may determine procedure for hearings, including the manner of giving notice of such hearings, not inconsistent with the provisions of this Act.

Hearings

Section 12. Before quotas are prescribed pursuant to any section of this Act, hearings shall be held after such reasonable public notice as may be prescribed by the Board (in no case less than ten days), and at any such hearings any person or governmental body interested in the subject matter of the hearing shall be entitled to be heard: Provided, however, That in case an emergency is found to exist by the Board temporary quotas for a period not exceeding 31 days may be prescribed by the Board without notice or hearing; but such temporary quotas shall thereafter be equitably adjusted at the earliest practicable date, and such adjustment shall be made after notice and hearing as herein provided; and provided further, That any orders or findings of State regulatory agencies relating to production or movement of petroleum may be adopted by the Board for the purpose of prescribing quotas pursuant to Section 9, without the necessity of a hearing.

Witnesses and Testimony

Section 13. The Board shall have, to the extent reasonably necessary to carry out the purposes of this Act, the power to examine witnesses, receive evidence, and administer oaths and affirmations; to take affidavits and depositions; and to require by subpoena the attendance and testimony of witnesses and the production of specifically designated books, records, and papers. Such attendance of witnesses, and the production of such books, records, and papers may be required from any place in the United States at any designated place of hearing. In case of refusal to obey a subpoena issued to any person, the Board may invoke the aid of any district court of the United States within the jurisdiction of which a hearing is being or is about to be held, or within the jurisdiction of which the person guilty of refusal to obey resides or carries on business or is found, and such court may issue appropriate orders requiring such person to obey such subpoena; and any failure to obey any such order of the court may be punished by such court as a contempt thereof.

The Board may order testimony to be taken by deposition in any proceeding or investigation pending under this Act at any stage of such proceeding or investigation. Such depositions may be taken before any person designated by the Board and having power to administer oaths. Such testimony shall be reduced to writing by the person taking the deposition, or under his direction, and shall then be subscribed by the deponent. Any person may be compelled to appear and depose and to produce books, records, and papers in the same manner as witnesses may be compelled to appear and testify and produce books, records, and papers before the Board as hereinbefore provided.

Witnesses shall be paid the same fees and mileage that are paid witnesses in the courts of the United States, and witnesses whose depositions are taken and the persons taking the same shall severally be entitled to the same fees as are paid for like services in the courts of the United States.

Court Review

Section 14. Any person adversely affected by any order, rule, or regulation issued or promulgated under the provisions of this Act, or by any act done or threatened thereunder, and who has exhausted his administrative remedies hereunder, or as may be provided hereunder, and who has presented to the Board a petition for relief which has not been granted, may seek court review by a suit for injunction in an appropriate district court of the United States. Such suit shall be tried in accordance with general equity principles: Provided, however, That no temporary, permanent, or other injunction, restraining order, or writ shall issue in such suit unless the case shall have been fully heard and determined by a court constituted of three judges in the same manner as provided in Section 380 of Title 28 of the United States Code. And courts so constituted shall have power to grant relief in such cases. Their decisions may be reviewed as provided by law and rules of court.

The provisions of this section for court review of decisions, orders, rules, and regulations of the Board, and action taken or threatened thereunder, shall be exclusive.

Enforcement of Orders

Section 15. If any person fails or neglects to obey any order, rule, or regulation of the Board while the same is in effect, the Board or the United States by its Attorney General, may apply to an appropriate district court of the United States for the enforcement of such order, rule, or regulation. The court shall enforce obedience to such order, rule, or regulation by a writ of injunction or other proper process, mandatory or otherwise. The court may also require any person who has moved in commerce, petroleum or the products thereof in excess of the applicable quota prescribed pursuant to the terms of this Act, to reduce his future movements in commerce to an amount below such quota so as to make up for the amount of such excess.

Penalties

Section 16. Any person who shall violate any provision of this Act or any order, rule or regulation issued or promulgated pursuant to this Act shall be guilty of an offense, and upon conviction thereof in any court of the United States of competent jurisdiction shall be punished by a fine not to exceed $1,000, or by imprisonment for not longer than one year, or by both such fine and imprisonment, and each day such violation continues shall be deemed a separate offense. Any person who shall import into the United States any petroleum or its products in violation of Section 5 or any order issued pursuant to Section 5, or who shall place, receive or transport in commerce crude petroleum or the products thereof in violation of any order issued pursuant to Section 9, shall also forfeit to the United States a sum equal to the value of such petroleum or product so imported or placed, received or transported in commerce, which forfeiture shall be payable into the Treasury of the United States and shall be recoverable in a civil suit in the name of the United States brought in the district where the offense was committed or in any district where such person may be found. The costs and expenses of such prosecutions shall be paid out of the appropriation for the expenses of the courts of the United States.

Any person who shall neglect or refuse to attend and testify, or to answer any lawful inquiry, or to produce any books, records, or other papers, if in his power to do so, in obedience to the subpoena or lawful requirement of the Board, shall be guilty of an offense and upon conviction thereof in a court of competent jurisdiction shall be punished by a fine of not more than $1,000, or by imprisonment for not more than one year, or by both such fine and imprisonment.

Any person who for the purpose of evading this Act, shall intentionally make, or cause to be made, any false entry or statement of fact in any report required to be made under this Act, or who for such purpose, shall so make, or cause to be made, any false entry in any account, record or memorandum kept by any person subject to this Act, or who for such purpose, shall omit to make, or cause to be made, full, true, and correct entries in such accounts, records or memoranda, of all facts and transactions pertaining to the interest or activities in the petroleum industry of such person, as may be required by the Board under authority given herein, or who, for such purpose, shall remove out of the jurisdiction of the United States, or mutilate, alter, or by any other means falsify any books, records, or other papers pertaining to the transactions regulated by this Act, shall be deemed guilty of an offense against the United States and shall be subject, upon conviction in any court of competent jurisdiction, to a fine of not more than $5000, or to imprisonment for a term of not more than three years, or to both such fine and imprisonment.

Any person aiding or abetting any other person in the violation of any provision of this Act or any order, rule, or regulation issued pursuant thereto shall be subject to the same penalties as are prescribed herein for the offense of such other person.

Movement of Excesses Over State Production Allowables

Section 17. If and when no applicable quota in commerce is in effect under Section 9 for a lease or property, and if and when a production quota or restriction upon production is in effect under State authority applicable to such lease or property, neither crude petroleum produced therefrom in excess of the State allowable nor products derived in whole or in part from such excess production shall be placed, received or transported in interstate commerce or exported until a permit is obtained from the Board; and any person placing, receiving or transporting the same in such commerce or exportation shall be subject to the penalties of Section 16 relating to placement, receipt and transportation in commerce when quotas under Section 9 are exceeded. No permit under this section shall be granted by the Board until the operator of the lease or property makes proof that production therefrom has been adjusted to conform to the rules and orders of the State authority, all periods considered, and that the applicant has in all respects complied with the provisions of this Act. The inhibitions and penalties of this section shall apply also to placing, receiving or transporting in intrastate commerce crude petroleum produced in excess of State allowables, or products derived therefrom in whole or in part, such transactions being here found to affect commerce among the States and with foreign nations.

National Industrial Recovery Act

Section 18. This Act shall not be construed to repeal such portions of the Code of Fair Competition for the Petroleum Industry, adopted pursuant to the National Industrial Recovery Act, as are not necessarily inconsistent herewith.

Saving Clause

Section 19. Any offense committed, or any right accrued, or any penalty or obligation incurred prior to the effective date of this Act under any provision of law or code of fair competition repealed by this Act, may be prosecuted or enforced in the same manner and with the same effect as if this Act had not been passed.

Separability of Provisions

Section 20. If any provision of this Act or any clause, sentence, or part hereof be held unconstitutional or invalid for any reason, or the applicability thereof to any person, circumstance, commodity, or class of transactions with respect to any commodity be held invalid, the validity of the remainder of the Act and the applicability of such provisions to other persons, circumstances, commodities, and classes of transactions shall not be affected thereby.

Definitions

Section 21. The words defined in this section shall have the following meaning when found in this Act, to wit:

(a) "Petroleum industry" means the producing, selling, shipping, processing, refining, transporting, or otherwise dealing in petroleum or the products thereof, including natural gasoline and natural gas produced in conjunction with petroleum.

(b) "State" means the District of Columbia and any State, Territory, or possession of the United States.

(c) "Person" means any natural person, corporation, association, partnership, executor, administrator, receiver, or trustee.

Short Title

Section 22. This Act may be cited as the "Federal Petroleum Act."

Taxation Bills Are Postponed

Austin, Texas.—The subcommittee to the House committee on revenue and taxation which was scheduled to report on a gross production tax bill Friday asked that more time be given. The committee acceded to their request.

The subcommittee is considering three bills, which would increase the gross production tax on crude oil. Increases proposed range up to six cents per barrel. The whole committee voted to delay the hearing on a proposed five-cent gasoline tax until the middle of March. County judges from all parts of Texas were present, prepared to urge the passage of this bill. It is planned to divert the proposed one cent increase to the school funds.

MARKETS and STATISTICS

Markets Firm With Hot Oil Decline in Prospect

THERE was a decidedly optimistic tone in the Mid-Continent refined oil markets late in the past week. Prices had not actually advanced, but were strong and expected to show improvement shortly.

The market strength was due primarily to the expectation that the new federal tender board would begin functioning immediately in East Texas and through its efforts practically eliminate hot oil producing and refining.

It is generally believed that majority of the numerous refineries in East Texas will be shut down when that tender board begins operating. A high proportion of the East Texas plants are alleged to have been operating on hot crude, and the gasoline they have been turning out has been largely responsible for keeping the tank car market of the Mid-Continent in a weak and unsettled condition.

At East Texas refineries very little third-grade gasoline eligible for tenders was available late in the week at 3⅜ cents a gallon. Owners of the tenderable material were holding out for at lease 3½ cents.

East Texas Trucks

There was some increase earlier in the week in truck movements of gasoline out of East Texas, the average rising to about 400 trucks daily. But in the closing days of the week it was indicated that only around 125 trucks a day were hauling gasoline out of the district.

The federal tender board will function under the recently enacted Connally law, which replaces the invalidated Sub-Section 9 (c) of the National Industrial Recovery Act. It will prohibit interstate shipment of oils produced in violation of the Texas Railroad Commission's orders.

Prices prevailing on tenderable U. S. motor gasoline at East Texas refineries, in tank car lots, late in the week, were about the same as they had been a week earlier, as previously indicated, although inclined toward greater firmness. For third grade, below 62 octane, the price varied from 3⅜ to 3½ cents, with but limited material available at the lower price. For standard grade, 62-67 octane, the average price was 4 cents a gallon, and for premium grade, 68-70 octane, 4½ cents.

Corresponding prices in both North Texas and Group Three (Oklahoma) region were 3⅜, 4⅛, and 4⅝ cents.

Large Stocks East Texas Market Factor

HEAVY stocks of refined and semi-refined products accumulated by East Texas independent refiners in recent weeks in expectation of a temporary let down on tender requirements by state authorities before the reestablishment of the federal tender board, as provided for in the new Connally hot oil measure, threatens to become a problem for Texas to cope with in the near future, pending the arrival of the personnel to comprise the new federal tender board the railroad commission has successfully prevented rail shipments lacking approved tenders from reaching Texas or interstate markets for several weeks, except for a small volume of fuel oil moved out under the protection of a federal court injunction.

Refinery Runs

During the week ending February 25 East Texas plants were credited with processing an average of 58,700 barrels daily of crude and rerun material, and for the week previous operations were carried on at rate of 66,600 barrels daily. Accounted for rail shipments of all products for the past week involved 1011 cars, containing approximately 8,588,153 gallons of miscellaneous products. The previous week's rail shipments involved 11,140,251 gallons in 1282 cars. Estimated tank truck shipments of gasoline and kerosene for the past week was placed at 1,925,000 gallons, as compared to 1,690,000 gallons the previous week. When refinery operations and rail and truck shipments are reconciled for the two seven-day periods it is quite apparent that the plant owners have been piling up stocks at an uncomfortable rate. Due to this condition confronting the principal market outlets for illegal crude production a slump in volume of hot oil was reported for the past week, and a substantial decline is due on the next weekly report. Hot oil production for the past week ranged near 35,000 barrels or slightly more daily, with most observers holding to the lower figure.

Now that the Connally measure is in effect, although enforcement machinery has not been perfected, it is almost certain that the incoming federal tender board will refuse to compromise with plants that have wilfully accumulated large stocks of petroleum products from crude of a questionable source. The board previously turned thumbs down on all propositions advanced last November and December to permit removal of "frozen" stocks that could not qualify for tenders.

State authorities will likely be forced at some future date to work out a plan of releasing the contraband material now on hand, and owners will probably start their pleadings shortly, in

East Texas Tank Car Shipments

Week Ending February 24, 1935

Products—	No. Cars	Estimated Gallons
Gasoline	465	3,767,469
Fuel Oil	203	1,959,541
Casinghead Gasoline	147	1,277,130
Distillate	65	531,355
Residuum	49	408,743
Gas Oil	44	355,617
Kerosene	29	213,252
Crude Oil	5	42,460
Crude Tops	3	24,395
Topped Crude	1	8,191
Total	1,011	8,588,153
Total Prev. Week	1,282	11,140,251
Coastwise	429	
Interstate	324	
Intrastate	258	
Total	1,011	
Tendered	959	
Without tenders	52	
Total	1,011	

the meantime a number of the 37 operating plants are faced with the threat of suspending operations for lack of storage. Stocks of gasoline carrying approved tenders in East Texas are reputed to be at a lower level. A substantial reduction was made the past week when Cities Service Oil Company contracted for more than 200 cars at 3⅜ cents per gallon, the prevailing market price on legal material.

Gasoline Tanker Rates Make Competition Hard

ALTHOUGH there is little gasoline moving out of California in tankers on spot sales, the major companies are refusing to quote low figures but some has been sold at prices close to 4.5 cents. Several offers have been made for tanker loads as low as 4.25 cents, but met with no takers.

Present tanker rates on either crude oil or gasoline from California to East Coast range from 60 to 70 cents, which includes canal tolls and insurance. It is almost impossible for California gasoline to compete with this product at the Gulf where motor fuel is quoted in bulk at 4.5 to 5 cents a gallon.

The marketing situation as a whole on the West Coast is fair, to say the least, and if the retail gasoline market was in a stabilized condition, the market would be in fine shape.

Fuel oil is strong with no evidence of weakness for the near future. The production of fuel in California is about offset by the West Coast consumption. Shipments of fuel through the Canal has shown a marked decrease for two months, but in spite of this, stocks were decreased 909,000 barrels in January.

This condition makes for a firmly stabilized market for California fuels. The revival of the mining industry has opened a good market for fuel oil. Lumber mills are operating and using this fuel.

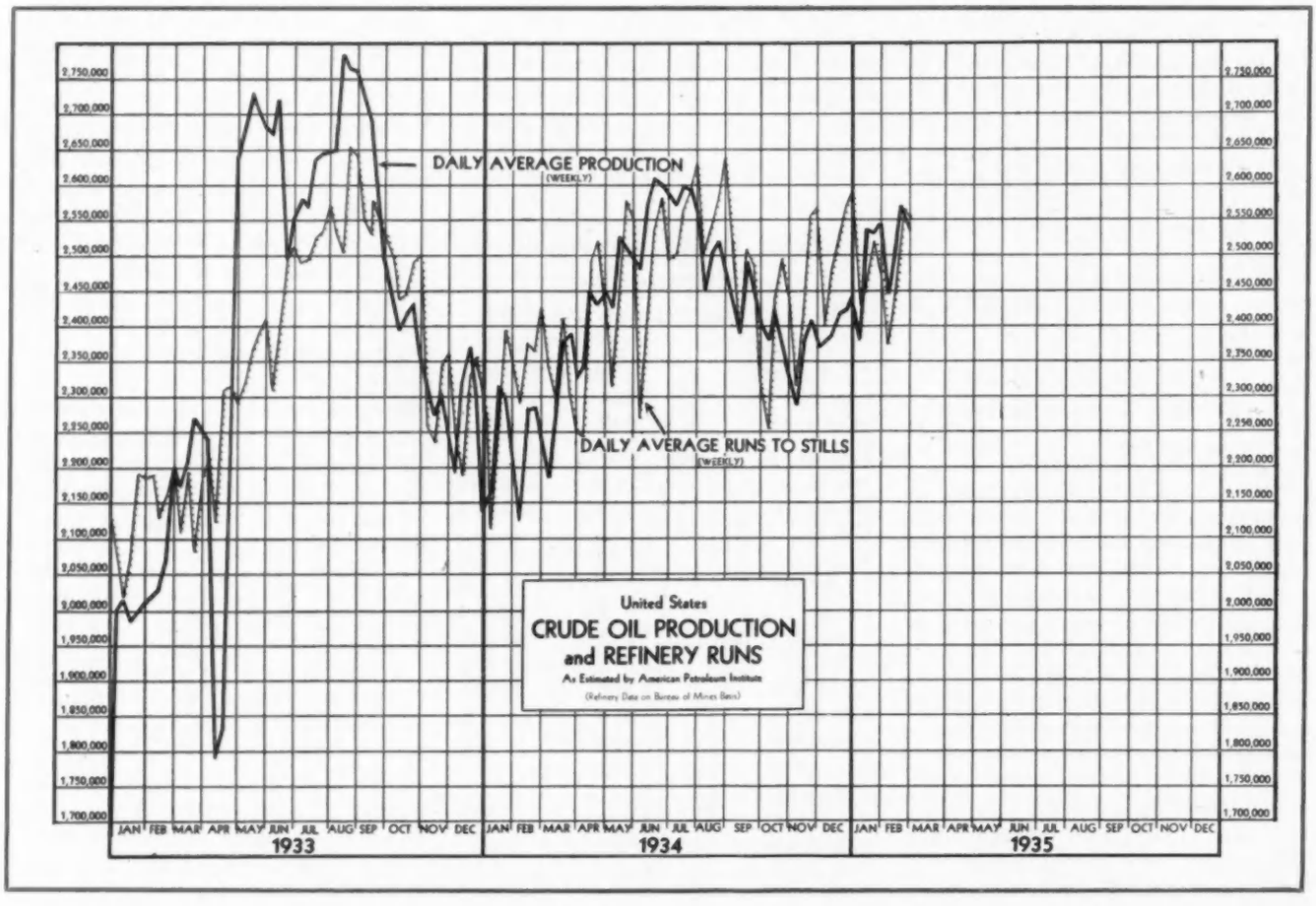
The only cloud to be seen at present is the cut price war in the retail sale of gasoline, largely in Southern California. Hundreds of stations are selling at 13.5 to 13.9 cents retail, with a tank car market close to 1.5 cents under the retail figure. Major company controlled stations are holding firmly to a retail price of 15.5 cents, while the tank wagon price is still 12.5 cents.

The sales agency so far has not been able to compose the various differences. Independent dealers are making a stubborn fight for the privilege under the code to retail at one half-cent under the regular major company price for third grade. Rumors are floating about that Department of Justice investigators are very active in California, but just what the investigators are looking for is not announced.

The agency has named a new committee with wide powers to investigate gasoline contracts when complaints are made, pass on controversies between members and act in a manner similar to a court of appeals. Practically all members signed an agreement to abide by the decisions of the committee. The new body is composed of Chas. S. Jones, vice president of the Rio Grande Oil Company; Chas. A. Johnson, president Socal Oil & Refining Company, and W. C. Van Fleet, manager of the agency.

Austin, Texas.—The Supreme Court last week overruled a motion for rehearing in the Federal Royalty and Mike Hogg cases, thereby definitely terminating these suits.

The cases are those in which the court held that royalties are taxable as an interest in real property.



Improved Oklahoma Market Is Expected

THE Mid-Continent Group 3, Oklahoma, market continued practically at a standstill during the week, with prices apparently fairly strong but still lacking a demand which would move normal amounts of material from the refining centers. It was reported, however, late in the week that inquiries were increasing, and some observers believed that jobber's stocks have reached the point that it is no longer satisfactory to buy on a day to day plan.

With reestablishment of the federal tender board in East Texas practically assured, there was a better feeling among Mid-Continent refiners and marketers. Although most of the hot oil material has moved coastwise from the East Texas area, refiners and marketers in the middle western states have looked upon the situation dubiously, and have expected something to happen at any time.

The return of bad weather with heavy snowfall in the northern Mississippi Valley area is reported to have again blocked practically all side roads in the agricultural districts, and travel is again restricted to a minimum.

Some jobbers are reported willing to stand back and feel out the market, even to the extent of taking chances on getting caught short with rapidly rising prices.

Considerable interest in being expressed as to the probable effects of the commodity exchange, which has been scheduled to go into operation early in March.

The third grade motor fuel, 62 and below octane, was the weakest feature of the Oklahoma market, although only limited amounts of material could be bought for less than 3¼ cents per gallon, the price now being demanded by East Texas refiners. Some deliveries were being made at 3⅛ cents, but it seemed the general opinion that a safe low would be an eighth of a cent higher.

Propose Gross Output Tax Increase in Texas

Austin, Texas.—A Senate tax committee, authorized to prepare recommendations on a revised tax program for the state, last week turned in its report urging an increase in the gross production tax on crude oil. The program suggested, however, that there be no increase in the gasoline tax.

"Notwithstanding the fact that the oil industry already shares a substantial part of the total cost of operating the state government," the report said in part: "(they claim to pay 25 percent of all ad valorem taxes), exclusive of gasoline tax paid by the consumer for highway bond and school purposes, it, nevertheless, occurs to this committee that the occupation or oil producers tax should be increased to a minimum of three cents per barrel or three percent of the market value at the well, whichever is highest. It would seem to be a sound public policy to make this increase in view of the fact that the State of Texas is the principal oil producing state and, further, it is probable that 90 percent of the oil produced in this state is consumed beyond its borders, domestic and foreign.

"Considerable emphasis was placed upon the advisability of increasing the gasoline tax from four to five cents . . . We are of the opinion that . . . the present tax of four cents per gallon with an additional federal tax of one cent is high enough under present conditions . . ."

San Antonio Makes Plans for A. P. I. Men

San Antonio, Texas.—An elaborate entertainment program is being planned for the spring meeting of the Production Division, Southwestern District of the American Petroleum Institute, to be held in San Antonio April 25 and 26. At a meeting of oil men and others interested in the meeting February 28, committees were selected and a tentative program outlined for the meeting.

The meeting will come at the time of the Annual Fiesta, celebrating the independence of Texas. As a result, the convention will be entertained with a number of the events regularly planned for this particular week.

The committees appointed include the following: Al Buchanan, drilling contractor, chairman; E. B. Rubsamen, SR & C Oil Company; O. E. Latimer, chairman of the convention department of the Chamber of Commerce; Arthur Pfiel, manager of the Convention Bureau.

Finance Committee: G. A. C. Halff, Blanco Oil Company, chairman; John M. Bennett.

Entertainment: Mr. Rubsamen.

Registration: Rex Watson, Humble Oil & Refining Company.

Program: Harry Nowlan, Darby Petroleum Corporation.

Golf: Ernest Brown, Alamo National Bank.

United States Production Continues Downward Trend

UNITED STATES crude oil production continued its downward trend during the past week, averaging 2,470,305 barrels daily, exclusive of oil surreptitiously produced. Average daily production during the previous week was 2,540,325 barrels.

Oklahoma led in the production decline, reporting a daily average of 457,825 barrels, as compared with 499,025

United States Crude Oil Production

Estimates Compiled by The Oil Weekly

District or State	Barrels Daily for Week Ending Mar. 2	Barrels Daily for Week Ending Feb. 23
TEXAS—		
Texas Panhandle	62,000	60,000
North Texas	58,000	58,100
West Central Texas	27,000	27,900
West Texas	149,000	148,000
East Central Texas	51,750	52,000
East Texas Field	*437,500	*436,000
South Texas	59,000	58,800
Texas Gulf Coast	175,000	176,200
Total Texas	1,019,250	1,017,000
OKLAHOMA—		
Oklahoma City	127,750	159,125
Seminole Area	113,425	123,650
Tatums	5,600	5,000
Lucien	8,375	9,100
Fitts	11,525	10,750
Others	191,150	191,400
Total Oklahoma	457,825	499,025
KANSAS—		
Ritz-Canton	10,450	10,600
Vashell	6,700	6,375
Nikkel-Hollow	11,025	12,670
Sedgwick	10,705	10,600
Burrton-Haury	21,000	21,650
Others	86,500	84,855
Total Kansas	146,380	146,750
LOUISIANA—		
North Louisiana	22,700	22,750
Louisiana Gulf Coast	94,000	93,000
Total Louisiana	116,700	115,750
ARKANSAS	31,000	31,100
CALIFORNIA—		
Long Beach	58,000	66,500
Santa Fe Springs	36,000	37,500
Huntington Beach	34,000	39,000
Dominguez	19,000	19,000
Inglewood	9,000	9,000
Ventura Avenue	24,000	22,500
Seal Beach	7,000	7,500
Midway-Sunset	47,000	53,000
Elwood	9,500	10,000
Kettleman Hills	69,000	68,000
Mountain View	11,000	11,000
Playa del Rey	7,000	7,500
Others	132,500	142,000
Total California	463,000	492,500
MOUNTAIN STATES—		
Wyoming	33,500	34,000
Montana	10,700	11,000
Colorado	4,100	4,000
Total Rocky Mountain States	48,300	49,000
NEW MEXICO	47,750	48,200
EASTERN STATES	104,100	104,000
MICHIGAN	36,000	37,000
Total United States	*2,470,305	*2,540,325
*Surreptitiously produced oil East Texas not included in above figures, estimated at	40,000	45,000
Grand total, including surreptitious production	2,510,305	2,585,325

Crude Runs to Stills, Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks; and Cracked Gasoline Production, Week Ended February 23, 1935

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	488	83.8	6,240	10,299	16,539	927	200	9,991	496	471	95.0	82
Appalachian	150	140	93.3	101	72.1	1,207	949	2,156	297	90	966	69	69	100.0	24
Ind., Ill., Ky	446	422	94.6	327	77.5	5,421	3,979	9,400	740	60	4,291	325	309	95.1	90
Okla., Kans., Mo	461	386	83.7	226	58.5	3,329	1,958	5,287	744	415	3,846	256	238	93.0	62
Inland Texas	351	167	47.6	103	61.7	1,300	91	1,391	215	430	1,868	82	66	80.5	29
Texas Gulf	601	587	97.7	569	96.9	5,887	297	6,184	1,421	115	8,954	358	355	99.2	100
Louisiana Gulf	168	162	96.4	112	69.1	1,042	520	1,562	266	.....	3,903	71	71	100.0	21
North La.—Ark.	92	77	83.7	41	53.2	176	77	253	41	70	434	41	38	92.7	7
Rocky Mountain	96	64	66.7	36	56.3	893	.....	893	113	50	716	46	42	91.3	11
California	848	822	96.9	429	52.2	8,696	2,038	10,734	940	2,560	65,610	209	209	100.0	60
TOTALS WEEK: February 23, 1935	3,795	3,409	89.8	2,432	71.3	34,191	20,208	54,399	5,704	3,990	100,579	1,953	1,868	95.6	486
February 16, 1935	3,795	3,409	89.8	2,440	71.6	33,111	19,305	52,416	5,429	4,020	100,886	1,953	1,868	95.6	483

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Feb. 23, 1935, compared with Feb. 1934 Bureau figures.

Estimate B. of M. Basis February 23, 1935	2,555		535
Estimate B. of M. Basis February 16, 1935	2,565		530
U. S. B. of M. February, 1934: Daily Average Crude Runs	2,374	U. S. B. of M. February, 1934: Daily Average Cracked Prod.	457

(a) Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b) Estimated. Includes Unblended Natural Gasoline at Refineries and Plants; also Blended Motor Fuel at Plants.

barrels during the previous week. The bulk of the decline was caused by the 31,375-barrel drop in the daily output at Oklahoma City. Seminole also showed a decline of about 10,000 barrels daily.

California continued its downward decline, the daily average production of 463,000 barrels being 31,375 barrels under the average for the previous week. The Long Beach field showed the sharpest drop in several weeks, while Huntington Beach, Midway-Sunset and miscellaneous fields recorded substantial declines.

Texas, Kansas and Louisiana reported daily averages in line with those of the previous week. Eastern states, New Mexico and Rocky Mountain states showed nominal changes during the week.

"Hot" oil, or surreptitious production, declined to an estimated daily average of 40,000 barrels during the past week. The bulk of this type of production comes from the East Texas field.

WALTER BUZZINI, Loma Oil Company, has returned to San Antonio after spending several weeks in the East.

Mid-Continent Production A.P.I. Meeting at Amarillo

Amarillo, Texas.—The regular spring meeting of the Mid-Continent district of the Division of Production of the American Petroleum Institute will be held in Amarillo, Texas, on April 10 and 11, 1935, in the Herring Hotel. The Panhandle Chapter will be host at this meeting and is organizing its forces to make it one to be remembered most favorably.

Amarillo has a spacious auditorium seating 3500 people with comfort and all sessions of the meeting will be held there.

The registration desk will be at the Herring Hotel and will be open on the afternoon of April 9.

Some of the subjects to be discussed will include: Geology and Petroleum Possibilities in the Panhandle Area; History of Carbon Black and Its Use in Industry; Helium Gas; Directional Drilling and several other subjects that now are up for consideration.

After the meeting on April 11, the entertainment committee has arranged for a banquet and show that will make the attending delegates remember Amarillo as a good convention city. Amarillo has ample hotel accommodations so that everyone attending may feel assured of a comfortable room at reasonable rates. The city auditorium, where the sessions will be held, has excellent facilities and will be equipped with sound amplifiers so that everyone in the house may hear every word of the various discussions.

The Panhandle Chapter of the A.P.I. is being assisted by local oil and business men who are now busy making special plans for the comfort and convenience of all visitors, further details of which will be announced from time to time.

Comparison of Permits Granted For New Wells

State—	Week Ending Feb. 23	Total this Mo.	Total this Year	Total this Date Last Year	1934 Year Total
Arkansas.	4	15	31	10	100
California	13	68	111	70	629
Louisiana.	14	63	112	122	799
Kansas...	24	113	226	116	1,015
Michigan.	9	26	62	65	460
Oklahoma	28	150	306	273	2,045
Texas....	361	903	1,993	1,181	10,550
Total..	453	1,338	2,841	1,837	15,598

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to March 1, 1935)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.08	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	3¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.06	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*$1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 6-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.15			2-1-35
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.08			5-26-34
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9-1-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	28— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .66	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.35			2- 4-35
Sw Pa. Pipe Line	*2.02			2- 4-35
Eureka Pipe Line	*1.97			2- 4-35
Buckeye Pipe Line	*1.87			2- 4-35
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Summary of Wells Completed in the United States
Week Ending March 2, 1935

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1935	Total Completions this date 1934
Alabama	1	...	...	1	.....	1	1
Arkansas	3	...	...	3	.....	35	13
California	8	7	...	1	3,990	98	52
Colorado	1	1	...	...	25	2	3
Illinois	...	...	...	...	.....	4	1
Indiana	...	...	...	...	.....	30	37
Kansas	34	24	...	10	19,900	192	115
Kentucky	...	...	...	...	.....	16	8
Louisiana	9	3	2	4	1,270	105	103
Michigan	4	1	1	2	45	50	72
Mississippi	1	...	...	1	.....	5	6
Montana	...	...	...	...	.....	8	15
New Mexico	8	8	...	...	22,935	39	16
New York	...	...	...	...	.....	....	3
Ohio	23	3	12	8	27	248	174
Oklahoma	41	22	...	19	29,270	318	299
Pennsylvania	1	...	1	...	.....	23	63
Texas	204	152	6	46	647,695	1,579	1,335
Utah	...	...	...	...	.....	....	3
West Virginia	19	1	15	3	3	84	81
Wyoming	...	...	...	...	.....	1	6
Total this week	357	222	37	98	725,160	2,838	2,406
Total last week	400	250	52	98	757,450	2,481	....
Total this year	2,838	1,815	266	757	5,254,435	....	....

MAJOR PRICE CHANGES

	Penns. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-13
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 15.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....
January 4, 1935	Up 15.	.....	.....
February 4, 1935	Up 15.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ⅛-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

Bureau December Report Shows Record Annual Demand

FEATURING the report of the Bureau of Mines on petroleum for December, 1934, was the information that domestic demand for motor fuel in 1934 set a new high annual record. The 1934 figure of 406,269,000 barrels was 2,851,000 barrels higher than the previous high of 1931.

Export figures on motor fuel were, however, less encouraging. The total for 1934 of 24,819,000 barrels was 4,502,000 barrels less than in 1933 and 20,897,000 barrels below the 1931 level.

Domestic demand for motor fuel in December, 1934, amounted to 30,517,000 barrels, or 984,000 barrels daily, a gain of about seven percent over December, 1933.

Finished gasoline stocks increased 4,119,000 barrels in December, in accordance with the program of building up depleted inventories. The amount on hand December 31 was 47,921,000 barrels, or 7,687,000 barrels less than a year previously.

Most of the other major refined products had higher demand also in 1934 than in 1933. Kerosene's domestic demand in 1934 was 5,476,000 barrels, or 14 percent higher; that of gas oil and fuel oil, was up 15,066,000 barrels or five percent; of lubricants, 1,345,000 barrels, or eight percent. Wax demand, in contrast, declined materially.

According to the Bureau of Labor Statistics, the price index for petroleum products during December, 1934, was 49.8, compared with 50.5 in November, and 51.6 in December, 1933.

Refinery data of the Bureau of Mines report were compiled from refineries with aggregate daily recorded crude oil capacity of 3,519,000 barrels. Those plants operated during December at 70 percent of their capacity, given above, compared with a ratio of 69 percent in November.

Crude oil production in the United States in 1934 totalled 909,345,000 barrels, according to the report. That was less than one percent above the output in 1933, although demand increased six percent. December, 1934, output averaged 2,420,000 barrels daily, or 5000 barrels more daily than in November.

In December crude runs to stills were 75,976,000 barrels, bringing the 1934 total to 893,302,000 barrels. That was 32,048,000 barrels higher than in 1933, but 94,406,000 barrels below the 1929 peak. Another material withdrawal from crude oil stocks was made in December, bringing the total at the end of the year to 337,085,000 barrels, or 17,220,000 barrels less than at the beginning of 1934.

Supply and Demand of All Oils

From Bureau of Mines December Report
(Thousands of barrels of 42 gallons)

	December, 1934	November, 1934	December, 1933	Jan.-Dec., 1934	Jan.-Dec., 1933
New Supply:					
Domestic production:					
Crude petroleum	75,010	72,463	72,157	909,345	905,656
Daily average	2,420	2,415	2,328	2,491	2,481
Natural gasoline	3,236	3,212	3,021	36,217	33,810
Benzol[1]	123	114	120	1,600	1,368
Total production	78,369	75,789	75,298	947,162	940,834
Daily average	2,528	2,526	2,429	2,595	2,578
Imports:					
Crude petroleum	[2]2,651	[2]2,653	2,876	33,055	31,893
Refined products	1,675	1,156	842	15,366	13,501
Total new supply, all oils	82,695	79,598	79,016	995,583	986,228
Daily average	2,668	2,653	2,549	2,728	2,702
Decrease in stocks, all oils	6,153	10,265	3,878	39,050	[3]11,013
Demand:					
Total demand	88,848	89,863	82,894	1,034,633	975,215
Daily average	2,866	2,995	2,674	2,835	2,672
Exports:					
Crude petroleum	2,432	4,680	2,636	41,123	36,584
Refined products	6,204	6,131	5,953	73,390	70,143
Domestic demand:					
Motor fuel	30,517	34,839	28,572	406,269	377,003
Kerosene	4,760	4,368	4,160	43,969	38,493
Gas oil and fuel oil	33,312	29,142	30,959	331,410	316,344
Lubricants	1,403	1,495	1,645	18,497	17,152
Wax	60	61	118	855	1,263
Coke	675	511	785	7,538	9,962
Asphalt	574	1,023	761	13,021	11,808
Road oil	137	257	230	7,848	5,266
Still gas (production)	3,789	3,622	3,557	44,362	45,212
Miscellaneous	175	205	137	1,873	1,464
Losses and crude used as fuel	4,810	3,529	3,381	44,478	44,521
Total domestic demand	80,212	79,052	74,305	920,120	868,488
Daily average	2,587	2,635	2,397	2,521	2,379
Stocks:					
Crude petroleum	337,085	341,165	[4]354,305	337,085	[4]354,305
Natural gasoline	3,740	3,714	[4]3,686	3,740	[4]3,686
Refined products	222,338	224,437	[4]244,222	222,338	[4]244,222
Total, all oils	563,163	569,316	[4]602,213	563,163	[4]602,213
Days' supply	196	190	226	199	226

[1]From Coal Division.
[2]Receipts of foreign crude as reported to Bureau of Mines.
[3]Increase.
[4]For comparison with 1934.

Plans for Government Gas Line Proceedings

Austin, Texas.—Governor James V. Allred last Thursday announced that he was proceeding with plans for a pipe line from the Texas Panhandle to northern and eastern points. The line is to be sponsored by the state and will serve to utilize for fuel, gas which is now being wasted in the field.

The governor hopes to finance the line with P.W.A. funds, and will ask the legislature to pass a bill authorizing the request for a loan for this purpose.

City officials in Detroit and St. Louis have been approached on the subject and the governor stated that they were favorably impressed. Detroit has sent a representative to Texas to confer with a technical advisory committee which has been working on the plan since December.

These two cities alone could use 400,000,000 cubic feet of gas daily. Other cities along the route would be approached to absorb a portion of the outlet carried through the proposed 24-inch line. A population of half a million would be served by the line before it reached either of the terminal cities, the governor estimated.

"The project does not contemplate the bonding of the state, nor the pledging of any of the state's assets," the governor declared. "It contemplates a loan to a public corporation, secured by the building of the line and ancillary compressing stations."

No serious legal barriers to the plan are anticipated, the governor said.

"The project offers a possibility of realizing a considerable profit from Texas gas, both to the landowners and the state, and will demonstrate the actual cost of establishing a major gas line and the cost of transportation of natural gas to domestic markets."

California A. P. I. Chapters Will Meet

Los Angeles.—The Los Angeles Basin Chapter of the American Petroleum Institute issues a cordial invitation to all oil men to attend its next regular meeting on Tuesday evening, March 12, in Shell Oil Company Recreation Hall, corner of Hill and Obispo Streets, Long Beach.

An interesting program on directional drilling, a subject of great interest at the present time, has been arranged. Various phases of the topic will be discussed, as follows:

"Taming Wild Wells by Directional Drilling," by H. John Eastman, president, Eastman Oil Well Survey Company.

"Drilling Three Wells from One Location," by W. C. Whaley, vice president, Barnsdall Oil Company.

"Directional Drilling Problems of the Huntington Beach Tideland Development," by R. H. Garrison, consulting petroleum engineer.

"Legal Aspects of Crooked Holes," by Rush M. Blodget, general manager, Oil Producers Sales Agency.

The program will start promptly at 7:30 p.m., and will be followed by light refreshments.

The San Joaquin Valley Chapter will meet on Tuesday evening, March 19, at Standard Oil Company Recreation Hall in Taft. Details of the program are not yet available.

All men interested in the oil industry are invited to these meetings, whether or not they are members of the Institute.

Committee Favors Larger Income for Commission

Austin, Texas.—The House Committee on Oil, Gas and Mining last Thursday reported favorably on a bill to increase by 50 percent the annual income to the Texas Railroad Commission. During the past year the commission's income totaled $466,000, approximately, the committee was told.

The present income is derived from a tax of ⅛ cent per barrel on all crude oil produced in the state. The new bill, as approved by the committee, provides for a tax of 3/16 cents per barrel, which results in a total annual revenue of $699,000, it was estimated.

Olin Culberson, chief of the pipe line division of the commission, stated that the present tender system enforcement would require $302,000 annually. He pointed out that $50,000 of the proposed increase would be diverted to the Attorney General's Department, to be used as an enforcement fund.

Attorney General McCraw appeared at the hearing and sought higher salaries for the attorneys in his department who would handle this work. He asked that a maximum salary of $5000 per year be fixed. He pointed out that his men would be required to compete with the best legal talent in the state, and that unless their salaries were adequate, they would resign and go into private practice. His request was denied.

The bill as introduced provided for ¼-cent per barrel tax, which would have doubled the commission's income.

Cite Three Concerns Under Connally Bill

Shreveport, La.—Federal Judge Dawkins of the western Louisiana district has cited two oil firms and a railroad to appear in court here March 8 to show cause why a temporary restraining order should not be issued against them in connection with the alleged movement of petroleum products from East Texas.

The order was issued after an equity suit was filed against the three firms by United States Attorney Phillip H. Mecom, acting under provisions of the recently enacted Connally oil act. Those cited are Griffin and Winters of Gladewater, Texas; Louisiana, Arkansas & Texas Railroad and Mike Liles doing business as OK Oil Company of Shreveport.

It is alleged that petroleum products were brought by truck to a point on the Louisiana-Texas state line and there loaded into railroad tank cars for shipment.

Yates Land Suit To Be Heard March 11

Waco, Texas.—Claimants to a choice section of the prolific Yates field, involving an alleged vacancy of 1023 acres among wells operated by Shell Petroleum Corporation, Stanolind Oil & Gas Company, Simms Oil Company and others were temporarily enjoined from attempting to obtain patents from the state in a decree given by Federal Judge Chas. A. Boynton on February 27.

John H. Tyler, M. H. Reed and others of Austin, with the support of the attorney general, have sought to dispossess the present lease owners on the grounds that the alleged vacancy is state land. J. H. Walker, state land commissioner, has refused to recognize the vacancy claims, while Judge Boynton denied Stanolind et al's plea for a temporary order restraining the land commissioner and governor from issuing patents to the land in question. He ruled that the Austin claimants must assume the burden of proof of the legality of their claim.

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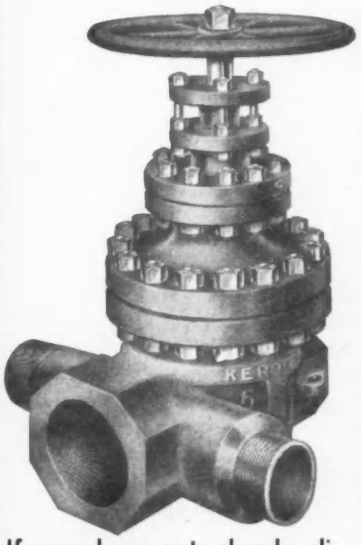

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MEN IN THE INDUSTRY'S NEWS

FRANK O. PRIOR, president of Stanolind Oil & Gas Company, Tulsa, Oklahoma, was in Houston during the past week consummating a deal with Yount Lee Oil Company for its holdings. He was accompanied by E. F. Bullard, vice president.

C. K. PORTER, superintendent for Wm. H. McKain Fuel Oil, Gladewater, Texas, spent several days in Tulsa late in February interviewing refiners and distributors with the view of purchasing equipment for the Gladewater plant.

H. K. V. TOMPKINS, head of the land and leasing department for Continental Oil Company, Ponca City, Oklahoma, was on a business trip through the Gulf Coast District during the past week. He stopped in Houston several days.

L. H. CULLUM, Wichita Falls producer, has been elected president of the North Texas Oil & Gas Association, succeeding C. P. McGaha of the Fain-McGaha Oil Corporation. J. H. S. Bonner and C. W. Boller were elected vice-presidents, and Fred Sehmann, an official of the Petroleum Producers Company was again chosen secretary-treasurer.

CLYDE CANTRELL, formerly with Amerada Petroleum Corporation land department in Texas and with Producers Pipeline Company, has been placed at the head of Mammoth Petroleum Corporation's Michigan land department.

C. K. WEST, member of the partnership firm of Pitzer and West, Breckenridge, Texas, and an official of The Chemical Process Company, Inc., is confined at a Fort Worth hospital as result of complications arising from a recent attack of the flu.

E. B. WILSON, geologist for Sun Oil Company, has been transferred from Tyler to San Angelo, Texas, succeeding Robert E. Rettger, who is to be located at the Dallas operating headquarters.

MILO ORR, geologist of Laredo, has become associated with Superior Oil Company of California, and has opened offices in Laredo. He will be in charge of the company's operations in Southwest Texas. Mr. Orr formerly was an independent geologist, doing considerable work in the Mirando district. Prior to that, he was associated with the Standard Oil Company of California, representing the company at several foreign posts.

EDWIN B. HOPKINS, consulting geologist of New York, Dallas and Houston, is visiting in Mexico City.

K. F. HASSELMAN, of Houston, has formed Tex-La Oil Corporation to replace Salt Dome Oil Company in South Texas. The company has developed production in both the Government Wells and West Tuleta fields. Salt Dome Oil Company will continue to operate in the Gulf Coast area. George W. Snider, South Texas representative, with offices in San Antonio, will continue to represent the Hasselman interests.

L. W. UMBURN, independent producer of San Antonio, is spending several days in Tulsa, Oklahoma, on business.

W. C. ROGERS, of Oklahoma City, associated with Rogers Oil & Gas Company, is in San Antonio. This company has several oil producers in the Samfordyce field.

HOWARD OLSON, recent engineering graduate at the University of Oklahoma, has been employed as a junior or "roustabout" engineer by British-American Oil Producing Company.

ARTHUR R. CAMPBELL of Shreveport, recently was named executive secretary of the Louisiana-Arkansas division of the Mid-Continent Oil and Gas Association, succeeding the late Joseph B. Elam.

ARTHUR R. CAMPBELL

W. D. "DOW" HAMM, regional geologist in the Gulf Coast area for Shell Petroleum Corporation, passed through Tulsa recently en route The Hague where he will spend several months. Hamm, a former University of Oklahoma football star, was at one time Shell geologist in the Ardmore, Oklahoma, district.

W. M. GADBERRY, sales manager and Ed H. Gill, sales engineer, for Columbian Steel Tank Company, Kansas City, Missouri, were business visitors in Tulsa during the week. Gill was recently transferred to Tulsa from where he will handle Oklahoma oil areas.

W. GUY SINCLAIR, scout for Gulf Production Company in North Texas with headquarters at Wichita Falls, spent several days last week in the Fort Worth district office of the company. Sinclair is the senior scout in his district, having about 15 years of continuous service.

CLARENCE M. CHASE, an employe of the lease rental department of Sun Oil Company, has been transferred from Dallas to San Angelo, to scout fields in West Texas and New Mexico, relieving C. C. Pope, who will devote his entire time to lease buying in the Permian Basin.

G. E. EVERETT, secretary of the Low Cost Roads Association with offices in Kansas City, Mo., was a recent business visitor in Tulsa. His activities during a short stay included conferences with refiners and a luncheon at which members of the oil press were guests.

DIED

EARL J. ANDERSON, 52, veteran drilling contractor and former production superintendent for Barnsdall Oil Company in East Central Texas district, was fatally stricken with a heart attack February 26 while in Tulsa. The body was forwarded to Fort Worth, where he has resided for some years, for burial.

MRS. WILLIAM FLEMING, 80, mother of Walter W. Fleming, vice president of the Ohio Oil Company and president of Marathon Oil Company, died at Salt Lake City, Utah, on Tuesday, February 26. Mrs. Fleming was the widow of a pioneer Oil City, Pa., oil man and had been prominent in the social circles of several eastern cities. Death was due to a heart attack.

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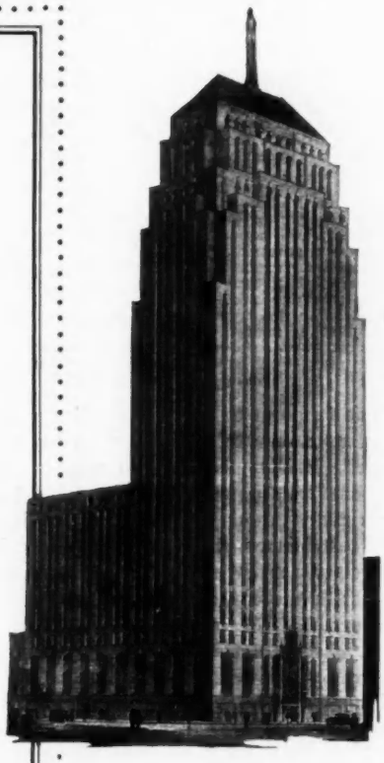

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The Interstate Compact and the Future of Market Demand Proration

(*Continued on Page 14*)

of capture, is well established in common law, and this view prevails in all states irrespective of divergent views as to the exact nature of the landowner's property interest in the oil in place.[3] It is equally well established that this common law privilege is subject to restriction and regulation under the police power of a state. Despite much loose popular use of the term "vested rights" it is elementary in the law that there is no such thing as a "vested right" which is immune from regulation under a valid exercise of the police power.[4] Thus, a landowner at common law unquestionably had a "vested right"[5] to drill as many wells upon his land as he pleased, but there is today no doubt as t the validity of reasonable police regulations for the spacing of wells which deprive him of this "vested right." And, if reasonably necessary in order to further some policy coming within the scope of a state's police power, the state can entirely prohibit a landowner from drilling any wells or from producing any oil from his land.[6] The federal and state constitutions merely provide that a person cannot be deprived of his property **without due process** of law but a taking of property under a reasonable exercise of the police power does, in fact, constitute due process, and such a taking of property is, therefore, valid constitutionally. Hence it is that the theory entertained in a particular state as to the nature of the landowner's interest in oil in place is of no importance in determining the validity of a police regulation restricting his common law privilege to produce except upon the issue of whether any taking of property at all is involved. The theory entertained in Texas, therefore, that a landowner has title to the oil in place constitutes no valid objection to reasonable police regulations restricting the production of his oil, and the cases have uniformly so held.[7]

The purposes of which the police power of a state may be exerted are many and varied. It is unnecessary to consider the scope of this power herein as applied to restrictions upon production of oil it is well established that the power may be exercised for either or both of two purposes: 1, the conservation of the natural resources of the state; and 2, the protection of the correlative property rights of the various owners over a common source of supply.[8] The proposed interstate compact does not deal with the latter policy and the State of Texas has never exercised its police power for this purpose, at least as the basis for proration of oil production, and until exercised by legislative mandate any police power remains dormant and cannot be considered by the courts in determining the validity of any administrative order. Hence, in testing the validity of market demand regulations in Texas, until the legislature decides to exercise the police power of the state to protect correlative property rights, except as incidental to the prevention of waste, we are remitted to a consideration of one police power purpose only, to wit, the power to conserve the natural resources of the state by the prevention of waste.

In view of the apparent emphasis placed upon the term "physical waste" in the proposed interstate compact, which was evidently intended to exclude consideration of economic waste except as an incident of physical waste, we must further restrict our discussion to the prevention of physical waste alone. Of course, all physical waste is necessarily economic loss or waste. Without attempting to determine the exact line of demarcation between physical waste and economic waste, it is obvious that all actual loss of oil either below or above ground so that it is effectively removed from possible application to consumptive purposes will clearly comprise "physical waste," and the term will be used in this very narrow sense in this discussion.

As was pointed out by the court in the case of **Danciger Oil & Refining Co. vs. Railroad Commission**[9] the fact that physical waste alone is to be prevented does not preclude the consideration of an economic fact, such as "market demand," for the purpose of preventing physical waste if it is reasonably calculated to accomplish this result.

The validity of statutes providing for the proration of oil production upon the basis of market demand where reasonably necessary for the prevention of physical waste was established beyond all possible controversy by the decision of the United States Supreme Court in the case of the **Champlin Refining Co. vs. Corporation Commission.**[10] But, as subsequently pointed out by the Federal District Court for the Western District of Texas, in the case of **Canadian River Gas Co. vs. Terrell,**[11] **Champlin Case** upholds the validity of such proration only where reasonably necessary to prevent waste, if the police power has been exercised only for this purpose, and the court proceeded to declare market demand proration of the Panhandle gas field invalid because the facts did not show that any waste was involved or that it was necessary to prorate the field in order to prevent waste.

We must, therefore, press our inquiry one step further. Can it be demonstrated as a fact that proration on the basis of market demand is reasonably necessary for the prevention of physical waste in all oil fields, with the exception of stripper or marginal well fields, which are never prorated anyway, or is this method of proration valid only in the case of a few exceptional fields, such as the Oklahoma City and Seminole fields, involved in the Champlin case? State-wide proration on the basis of market demand is impossible if the latter is true.

It must be admitted that the amount of oil that could be produced from any given oil pool without underground physical waste, assuming an unlimited market demand, bears no direct relation to the market demand for oil from that pool. It may be that the market demand is in excess of the total amount that could be produced without causing such underground waste. Where this is true that pool should be prorated on the underground waste basis rather than upon market demand, and the excess demand for oil from that pool should be diverted to other pools which could satisfy it without causing such underground waste. During the present era of oversupply the normal situation is the converse one where the market demand for a pool is less than the amount of oil that could be produced therefrom without underground waste, disregarding waste incident to production in excess of market demand. Where this situation prevails, will physical waste inevitably result if the pool is permitted to produce in excess of its reasonable market demand although not in excess of the amount which is its maximum possible non-wasteful production, assuming an unlimited demand? If this question cannot be answered in the affirmative, then in so far as limitation of production is to be justified solely on the ground of the prevention of physical waste, market demand proration should be discarded and proration in each pool should be upon the basis of the maximum non-wasteful production from that pool without regard to market demand. It is submitted, however, that this question can be answered in the affirmative, and that adoption of proration on the latter basis, which may be regarded as inevitable if the market demand standard is discarded, would result in serious physical waste of this natural resource.

Within the limits of this paper it is impossible to discuss the types of waste resulting from production in excess of market demand except in a very general manner. One of the most serious types of waste that would result would be underground waste resulting from unratable production of the oil. It must be so obvious as not to require discussion that ratable production of oil from a pool can only be obtained by proration on the basis of market demand, unless you have complete unitized development of the pool. Unratable production of oil according to unbiased scientific opinion results in a wasteful dissipation of the reservoir energy of a pool, and, if continued, will lead to premature and irregular water intrusion, coning and channeling, thereby resulting in the entrapment of oil within walls of water, and it can never be recovered unless prices should rise to levels never yet experienced which would justify expensive salvage operations in the pool.

Another type of waste prevented by restriction of production on the basis of market demand is waste resulting from unnecessary storage. Considerable storage losses occur with respect to such a volatile commodity even where the most modern types of storage facilities are used,[12] which is rarely true in a field of flush production. In addition to loss from evaporation, unnecessary storage increases the amount of loss resulting from the destruction of oil and its products by fire, and serves to increase unnecessarily the fire hazard.[13]

Another extremely serious type of physical waste which results from production in excess of market demand is the loss of valuable recoverable oil reserves in areas of small settled production. The oil from flush fields, where lifting costs are practically eliminated, will always represent the low cost units of the oil industry and if oil from these fields is produced in excess of the market demand for the field it will inevitably seize the markets of the higher cost fields of settled production. The producers in these fields, in that event, must either store their oil, which is economically impossible because of the small margin of profit, or else shut in their wells. Many of these wells would be destroyed, if shut in, by water encroachment, although the number of wells that would be lost from this reason has perhaps been somewhat exaggerated. However, if these wells are shut in, the leases, in many instances, under which they are being operated will terminate by their own terms. In that event there is nothing for the operator to do but to plug his well and attempt to salvage as much of his investment as possible by removing the casing. Irrespective of lease terminations, it is obvious that many of these wells would have to be abandoned because of unprofitable operation. It is estimated that there are more than 25,000 of these small wells in the State of Texas alone and they represent a daily production of more than 200,000 barrels of oil, and an ultimate recoverable reserve of approximately 300,000,000 barrels of crude oil.[14]

All the foregoing arguments have been made to the courts in the numerous cases that have been brought testing the constitutionality of market demand proration in Texas. Despite popular belief to the con-

trary the federal courts of the state have not yet definitely upheld any proration order of the railroad commission on the ground that restriction of a pool to its market demand was necessary in order to prevent physical waste. It is equally true that they have never held any Texas statute authorizing proration on this basis to be invalid. Several proration orders of the railroad commission have been upheld as valid, but the three-judge federal court, in the recent case of **Amazon Petroleum Corporation vs. Railroad Commission,**[15] in reviewing and interpreting all the earlier federal court decisions on proration in Texas, took the position that in those cases in which the validity of the Texas statutes, or orders of the railroad commission, had been upheld, including the proration order therein involved and held valid, it had never been necessary to pass directly upon the question of the validity of the market demand law.

A brief review of these decisions may be of interest in revealing the attitude of the federal courts in Texas on this problem. The first compulsory proration order promulgated by the Texas Railroad Commission was issued August 14, 1930.

Shortly thereafter the Oklahoma Supreme Court in the first test case on proration, **Julian Oil Co. vs. Capshaw,**[16] upheld the Oklahoma market demand law. In February, 1931, a state district court in the **Danciger case** upheld a proration order covering the Panhandle oil field in Texas, but in July, 1931, a three-judge Federal District Court, in the case of **MacMillan vs. Railroad Commission,**[17] struck down a proration order applicable to the East Texas field as invalid. At the time of these controversies the Texas statutes[18] did not specifically authorize the commission to issue proration orders of any character, but delegated to it in rather broad language the power to prevent waste, with the proviso that this should not be construed to mean economic waste. The order was declared invalid by the federal court not because in violation of any constitutional provisions but because it appeared from the evidence in that case that the order was neither designed to prevent, nor did it actually prevent, physical waste as defined, but, to the contrary, dealt solely with economic waste in violation of the statutory prohibition. It was, therefore, held that the legislature had not delegated to the commission the authority to issue such an order. An appeal was taken to the United States Supreme Court but, by the time the case reached this tribunal, the case had become moot because of the repeal of the statutes involved, and was dismissed for that reason[19]. It is interesting to note that in **Danciger Oil & Refining Co. vs. Railroad Commission,**[20] the case brought in the state court involving the validity of the Panhandle field proration order issued under the same statute, the state intermediate appellate court reached a directly opposite conclusion. The appeal in this case to the State Supreme Court was likewise dismissed on the ground that the controversy had become moot.[21] As pointed out by the state court in its opinion, the cases cannot necessarily be regarded as expressing different views as to the law because each court's opinion was addressed to the record made in each of the respective cases. The **MacMillan Case** really decides nothing more than that the court did not believe on the basis of the record made in that case that the particular order before the court was issued for the purpose of preventing waste, or had that effect.

In August, 1931, the Texas legislature, immediately after the decision in the **MacMillan case** and undoubtedly because of that decision, amended its statute so as to expressly forbid the railroad commission "directly or indirectly, to limit the production of oil to equal the existing market demand for oil."[22] The statute, however, did authorize the commission to restrict the production of an entire field wherever necessary to prevent waste, as defined therein, and to prorate the aggregate amount among the wells in the field. An interlocutory injunction against the enforcement of a proration order under this statute was denied in **People's Petroleum Producers vs. Sterling**[23] on the ground that the statute was valid, but, when the case came up on final hearing, in **People's Petroleum Producers vs. Smith,**[24] the order was held invalid because it arbitrarily apportioned the allowable on a uniform per well basis without regard to any difference in productive capacities and because the court, upon the basis of the record made, was convinced that the commission had really, in order to effectuate some previous agreement, prorated the field on the basis of the market demand in the face of the statutory prohibition. These cases have no particular bearing upon the validity of proration to market demand where the state has expressly exercised its police power to accomplish this purpose.

After the decision of the United States Supreme Court in the Champlin case on May 16, 1932, the Texas legislature felt safe in proceeding to enact a market demand statute modeled upon the Oklahoma act sustained in that case. This statute,[25] the one in force at the present time, was passed on November 12, 1932, immediately following the unfavorable decision upon the order of the commission issued under the prior statute in the People's case.

The first case to be brought against the enforcement of an order issued under this statute was Danciger Oil & Refining Co. vs. Smith.[26] The three-judge federal court sustained the validity of an order restricting the production of the Panhandle oil field to its market demand. This decision was generally regarded as establishing the validity of proration on the basis of market demand in Texas. The court, in referring to the market demand section of the statute under which the order in question was promulgated, stated:

> Nor do we have any doubt that the enactment of subdivision (k) was intended to, or that it did, fully empower the commission to prevent such excess production beyond transportation and market facilities as would result in the physical waste of the oil by evaporation or otherwise, or the energy by which it is brought to the surface and saved.

The court also took occasion to point out expressly that the legislature had just as much power to prevent waste overground (i.e. waste resulting from unnecessary storage) as it had to prevent underground waste, and referred to the general provision in the Texas statutes prohibiting, among other things, wasteful storage.

It is true that the same judge, in the subsequent case of **Amazon Petroleum Corp. vs. Railroad Commission,**[27] stated that the order in the Danciger case was not sustained on the market demand section of the statute, but he again took occasion to reiterate the power of the state to authorize the commission "to prevent actual waste of oil or gas from production in excess of market demand through inability, because of overproduction, to make use of and handle it . . ."

One cannot make a careful study of these decisions by Judge Hutcheson without being impressed by his repeated and forceful support of the state's power to prevent the waste of its natural resources. The thing always condemned by him was any abuse of power by the commission in arbitrarily, by agreement or otherwise, fixing a certain amount to be the market demand and restricting production to this amount, not for the purpose of preventing waste, but in order to achieve some unauthorized end. There is nothing in any of his opinions which would preclude the commission from restricting production to the real market demand, honestly arrived at, and adopted for the purpose of preventing waste, if the restriction would reasonably accomplish this purpose. Indeed, the opinion in the Danciger case, in view of his discussion of that case in the Amazon case would seem to be susceptible of the construction that, even without the market demand section in the statute, the commission could restrict production to the real market demand if waste would result from production in excess of this amount by reason of evaporation losses or otherwise.

In the most recent proration decision in Texas, rendered in the Amazon case above referred to, the court sustained the validity of a proration order of the commission applicable to the East Texas field. In its opinion the court took the position that it was unnecessary to determine whether the order could have been sustained on the basis of a restriction of the production to the market demand in as much as it appeared that the amount of production to which the field was restricted was reasonably calculated to prevent underground waste, irrespective of wastes that might follow from production in excess of market demand.

The court in this case expressed some doubt on the question of whether "reasonable market demand," as used in the Texas statutes, referred to buyer demand or consumer demand. Buyer demand, of course, will include demand for speculative storage and will involve duplicated demands where the competing buyers are hopeful of disposing of their purchases to the same re-purchasers or consumers, in which case the unsuccessful buyer will be forced to place his oil in storage. The consumer demand standard, on the other hand, will prevent unnecessary storage by restricting the production of oil to current consumer requirements plus production to maintain such storage as may be reasonably necessary properly to safeguard the satisfaction of these requirements. It is, therefore, better designed to prevent waste resulting from unnecessary storage as was pointed out by the Pogue affidavit referred to in the Amazon case.[28]

It would seem that the commission, unless expressly prohibited by statute, should be permitted to utilize the most accurate and scientific method of measuring market demand that is available, and particularly, should be permitted to adopt the one best designed to prevent one of the forms of

waste attempted to be eliminated by the market demand law. In this regard the use by the legislature of the term "reasonable" would seem to be significant.

From this review of the decisions involving proration on the basis of reasonable market demand in Texas it is at once apparent that no proration order has ever been declared invalid since the legislature adopted the present statutes specifically authorizing proration on this basis. And, while there have been no clear cut decisions supporting proration of production to reasonable market demand, there is nothing in the previous decisions of the courts which would preclude them from adopting this view if the orders of the commission are reasonable, based upon a scientific, as distinguished from an arbitrary, determination of market demand, and in accordance with authority delegated to it by statute.

This discussion would not be complete without reference to the charge frequently made that proration is a price fixing device and that it promotes monopoly. It will be recalled that the proposed interstate compact expressly provides against regulations for either of these purposes. The argument with reference to price fixing should be regarded as completely answered by the opinion of the United States Supreme Court in the Champlin case[29] wherein it was held that the market demand proration order therein involved was not subject to this objection. It must, of course, be admitted that an administrative agency could by arbitrary determinations of the market demand undertake to influence the course of prices, but as long as the market demand is fairly and honestly estimated this objection cannot obtain. As pointed by the Federal Trade Commission in its Report on the Petroleum Industry[30] the demand for gasoline, the principal refined product of oil, is relatively inelastic, and considerable variations in price may occur without any material change in consumptive demand. The consumptive demand within reasonable limits is determined by the number of motor units and general economic conditions, rather than by price. It is in part because of this inelasticity that the United States Bureau of Mines has been enabled to develop during recent years a remarkably accurate technique for forecasting the consumer demand for short periods of time. When checked back against actual consumption during the periods covered by the forecasts they have, since recent adoption of improvements in this technique, rarely been found to be more than a fraction of one percent in error.[31] The existence of a technique of established accuracy for forecasting reasonable market demand, if utilized, will remove any question as to the determination of market demand arbitrarily for the purpose of influencing price.

It would seem, therefore, that proration on the basis of reasonable market demand comports entirely with the spirit and terms of the proposed interstate compact, and that the failure of the states to reach an accord for unified action is not to be interpreted adversely to the continuance of market demand proration by the several states in their separate capacities.

Footnotes

[1] Acts 1932, 42nd Leg., 4th C.S., p. 3, ch. 2.
[2] See, Marshall and Meyers, "Legal Planning of Petroleum Production," 41 Yale Law Journal, 33 (1931), 42 Yale Law Journal, 702 (1932); Ford, "Controlling Oil Production," 30 Michigan Law Review, 1170 (1932).
[3] Summers, Oil and Gas, 68-69 (1927).
[4] Lombardo vs. City of Dallas, 73 S.W. (2d) 475 (Tex. Sup. Ct., 1934).
[5] Oxford Oil Co. vs. Atlantic Oil & Producing Co., 16 Fed. (2d) 639 (N. D. Tex. 1926), affirmed, 22 Fed. (2d) 597 (C.C.A. 5th 1927), cert. denied, 277 U.S. 585, 48 Sup. Ct., 433, 72 L. Ed. 1000 (1927); Railroad Commission vs. Bass, 10 S.W. (2d) 586 (Tex. Civ. App. 1928); State vs. Jarmon, 25 S.W. (2d) 936 (Tex. Civ. App. 1930, writ of error dismissed); Rabbit Creek Oil Co. vs. Shell Pet. Corp., 66 S.W. (2d) 737 (Tex. Civ. App. 1933).
[6] Marblehead Land Co. vs. City of Los Angeles, 47 Fed. (2d) 528 (C. C. A. 9th, 1931), cert. denied, 284 U.S. 634, 52 Sup. Ct. 18, 76 L. Ed. 540 (1931); Marrs vs. City of Oxford, 24 Fed. (2d) 541 (D. Kan. 1928), affirmed, 32 Fed. (2d) 134 (C. CA. 8th, 1929), cert. denied, 280 U.S. 573, 50 Sup. Ct. 29, 74 L. Ed. 625 (1929); Gant vs. City of Oklahoma City, 289 U.S. 98, 53 Sup. Ct. 530, 77 L. Ed. 1058 (1933); Winkler vs. Anderson, 104 Kan. 1, 177 Pac. 521 (1919).
[7] Danciger Oil & Refining Co. vs. Railroad Commission, 49 S.W. (2d) 837 (Tex. Civ. App. 1932), dismissed, 122 Tex. 243, 56 S.W. (2d) 1075 (1933); Henderson, Inc. vs. Railroad Commission, 56 Fed. (2d) 218 (W. D. Tex. 1932); People's Pet. Producers vs. Sterling, 60 Fed. (2d) 1041 (E. D. Tex. 1932); MacMillan vs. Railroad Commission, 51 Fed. (2d) 400 (W. D. Tex. .1931); Oxford Oil Co. vs. Atlantic Oil & Producers Co., 16 Fed. (2d) 639 (N. D. Tex. 1926).
[8] Walls vs. Midland Carbon Co., 254 U.S. 330, 41 Sup. Ct. 118, 65 L. Ed. 276 (1920); Ohio Oil Co. vs. Indiana, 117 U.S. 190, 20 Sup. Ct. 576, 44 L. Ed. 729 (1900); Bandini Pet. Co. vs. Superior Court, 284 U.S. 8, 52 Sup. Ct. 103, 76 L. Ed. 123 (1931); Champlin Ref. Co. vs. Corporation Commission, 286 U.S. 210, 52 Sup. Ct. 559, 76 L. Ed. 1062 (1932).
[9] 49 S.W. (2d) 837 (Tex. Civ. App. 1932), appeal dismissed, 122 Tex. 243, 56 S.W. (2d) 1075 (1933).
[10] 286 U.S. 210, 52 Sup. Ct. 559, 76 L. Ed. 1062 (1932).
[11] 4 F. Supp. 222 (1933).
[12] Schmidt, "Applied Methods and Equipment for Reducing Evaporation Losses of Petroleum and Gasoline," Bull. 379, Bureau of Mines, 1934, p. 160.
[13] See, Petroleum Investigation, Hearings Before a Subcommittee on Interstate and Foreign Commerce of the House of Representatives (73rd Congress), Part 2, pp. 1247-8.
[14] From figures compiled in 1934 by engineers for the Texas Railroad Commission, see Brief for the Railroad Commission in Amazon Pet. Corp. vs. Railroad Commission, page 21.
[15] 5 F. Supp. 633 (E. D. Tex. 1934).
[16] 145 Okla. 237, 292 Pac. 841 (1930).
[17] 51 Fed. (2d) 400 (W. D. Tex. 1931).
[18] Acts 1929, 41st Leg., R.S., p. 694, ch. 313.
[19] 287 U.S. 576, 53 Sup. Ct. 223, 77 L. Ed. 505 (1932).
[20] 49 S.W. (2d) 837 (Tex. Civ. App. 1932).
[21] 122 Tex. 243, 56 S.W. (2d) 1075 (1933).
[22] Acts 1931, 42nd Leg., 1st C.S., p. 46, ch. 26.
[23] 60 Fed. (2d) 1041 (E. D. Tex. 1932).
[24] 1 F. Supp. 361 (E. D. Tex. 1932).
[25] Acts 1932, 42nd Leg., 4th C.S., p. 3, ch. 2.
[26] 4 F. Supp. 236 (N. D. Tex. 1933).
[27] 5 F. Supp. 633 (E. D. Tex. 1934).
[28] See page 637 of the opinion, supra note 27.
[29] For other excellent judicial refutations of this charge, see, Danciger Oil & Refining Co. vs. Railroad Commission, 49 S.W. (2d) 837 (Tex. Civ. App. 1932); People vs. Associated Oil Co., 294 Pac. 717 at 725 (Calif. Sup. Ct. 1930).
[30] For an explanation of this technique, see, Petroleum Investigation, Hearings Before a Subcommittee on Interstate and Foreign Commerce of the House of Representatives (73rd Cong), Part 2, pp. 1298-9, and for a statement as to its accuracy see Part 4, p. 2611.

Lift Equipment Being Installed on Binger Well

Binger, Oklahoma.—Denver Producing & Refining Company was reported installing lift equipment in its famous Adah Noe 1, NW SW SW 34-10n-10w, approximately five miles east of here in northeastern Caddo County. Since this company completed its six-month fishing job in January, the well has been flowing by heads at a rate varying from 75 to 100 barrels daily from sand lying between 9908 and 9986 feet, the deepest production ever obtained in the world. Total depth of the hole is 11,230 feet, the third deepest in the world. If it is a commercial producer it will be the deepest oil well in the world.

Coal County Test To Seek Bromide Pay

Tupelo, Oklahoma.—E. W. Whitney et al were reported pulling 5 3/16-inch casing and planning to drill to Bromide sand in Miller 1, SE SE NE 10-2n-8e, old abandoned wildcat test 4½ miles north of here and 9½ miles northeast of the Fitts pool in western Coal County. This test originally was completed dry at 1814 feet in April, 1932, was deepened to 2950 feet in November, 1933, and has been standing temporarily abandoned since that time. During the past few months Shell Petroleum Corporation has been blocking heavily in the area and according to reports the Miller test is located approximately in the middle of the big checkerboard block.

Lincoln County

Sparks, Oklahoma.—Carter Oil Company late in the week staked location for McFarland 1, SW SW NE 18-13n-4e, a wildcat test six miles west of here in south central Lincoln County. Nearest production is in the Chandler pool.

Guthrie Wildcat Coring in Simpson

Guthrie, Oklahoma.—The heat had been turned off of one of the most closely watched wildcat tests in Oklahoma as Shell Petroleum Corporation cored deeper into the Simpson section in Hirzel 1, SE SW SW 7-16n-2w, less than a half mile from the Guthrie city limits in south central Logan County. This test topped Oswego lime at 5155 feet and was 268 feet higher than a nearby dry hole on that formation. Greater than the expected thicknesses

of Hunton lime, Sylvan shale and Viola lime gradually cut this figure down until many of those who are watching the test no longer concede it chances for production. Top of Simpson dense was encountered at 5742 feet, Simpson dolomite at 5815 feet and top of a sand probably Wilcox at 5846 feet. Late in the week operators cored from 5881 to 5897 feet, recovering five feet of light brown sand with a small showing of oil, two or three inches of green shale, five feet of grey calcareous sand and six feet of dolomite with nothing further showing. It was coring ahead at approximately 5900 feet. It is reported that sand cores yield a salty or brackish taste.

Humble Texas Block Extends Into Oklahoma

Hollis, Okla.—Humble Oil & Refining Company has reentered the state of Oklahoma in its leasing campaign after several years of limiting its operations to states where Carter Oil Company does not operate. The move, however, does not signify that the company will again become active in Oklahoma since the leases recently taken are part of a block in Childress County, Texas, and extend over the Texas-Oklahoma line only one mile. Leases assembled by R. W. Leftwich and assigned to Humble were as follow: N½ SE and SW SE and Lots 3 and 4 and SE SE Section 11; SE NE, SE, N½ NE and SW NE Section 14; S½ NE and SE Section 23; and NE and SE Section 26, all in 2n-27w, the westernmost tier of sections in southwestern Harmon County, Oklahoma.

Three Oklahoma Lease Sales in March

Tulsa.—Land and geological departments of Mid-Continent companies will be called upon to study more than 30,000 acres of restricted Indian lands during the next 15 days in preparation for three sales to be held during March. On Wednesday, March 6, sealed bids will be opened on 1,073.02 acres in southern Caddo County by the Kiowa Agency at Anadarko. On Thursday, March 14, the Five Civilized Tribes will offer for sale to the highest bidder, oil and gas leases on 175 tracts comprising 16,503.23 acres in 21 counties, and on Wednesday, March 27, the Osage Agency will offer 12,594.76 acres in 33 Osage County areas.

Frannie, Wyo. — Continental Oil Company is moving in rotary equipment for Northern Pacific 2, NW SE SE 23-58n-98w, in the Frannie Dome oil field, Park County, northern Wyoming.

Oklahoma Pools Need Less Output Restrictions

Oklahoma City.—The lack of need for restriction of production in the older prorated pools of Oklahoma was further recognized in the state-wide proration hearing held here early this week when operators recommended that all pools which were producing to capacity during February be allowed to continue on that basis during March. It was suggested that the next group of pools to be placed on open flow would be those of the Earlsboro area of the Seminole district. Pools recommended for capacity production during March were as follows: East Little River, Mission, Searight, East Seminole, West Asher, Konawa, Allen, Tatums, Oklahoma City Simpson Below Wilcox and Fault Line zones.

In considering development in the leading pools during the coming month it was estimated that the Altus pool would have four wells on production;

Oklahoma Proration Table

CLASSIFICATION	Feb. 1935 Allowable	Suggested Mar. 1935 Allowable
CLASS "A" POOLS:		
Oklahoma City—Wilcox Zone	126,567	126,600
CLASS "B" POOLS:		
Oklahoma City—Simpson Zone	28,000	25,000
Oklahoma City—Fault Line Zone	700	500
Seminole proper et al	54,639	55,000
Other Seminole Pools		Capacity
East Little River	595	Capacity
Mission	2,788	Capacity
Searight	2,656	Capacity
East Seminole	1,071	Capacity
Total	7,110	9,000
Maud	945	Capacity
Asher-Wanette	1,067	Capacity
Konawa	1,797	Capacity
Sasakwa	767	Capacity
Allen	7,119	Capacity
Tatums	6,306	Capacity
Total	18,001	19,000
St. Louis	23,164	25,000
Sasakwa Townsite	1,460	1,700
Calvin Sand—East Earlsboro	1,374	1,300
Fish-Cromwell	5,000	5,000
CLASS "B" TOTAL	139,448	141,500
CLASS "C" POOLS:		
Crescent	4,293	4,300
Edmond	1,200	1,500
Fish-Wilcox	1,800	1,800
Fitts-Bromide	9,000	9,000
Keokuk Falls	1,288	1,500
Lucien	8,587	9,000
Polo	2,500	3,000
Gessman		800
CLASS "C" TOTAL	28,668	30,900
CLASS "D" POOLS	4,500	5,000
VOLUNTARY PRORATED POOLS:		
Naval Reserve	8,199	8,199
South Burbank	10,670	10,670
Chandler	6,000 Est.	6,000
Gray	1,731	1,731
Total	26,600	26,600
TOTAL PRORATED AREAS	325,783	330,600
Unprorated less Voluntary Prorated Pools	171,317	160,400
GRAND TOTAL	497,100	491,000

East Lucien, three; Grayson, three; and Fitts, 19 to be completed in March. In the Gessman pool of Lincoln County, The Texas Company is finishing the fifth well and is starting three more, two of its own and one in partnership with Slick-Urshel Oil Company.

The committee recommended a daily allowable of 491,000 barrels for March to conform to the federal allocation. It was believed, however, that some increases might be permissible during the month since several areas have fallen below their allowables in recent months. Allocations by pools for March and a comparison of these allowables with those of February are shown in the accompanying table.

Logan County

Guthrie, Oklahoma.—Sinclair Prairie Oil Company's School Land 1, C SE 36-17n-1w, nine miles northeast of here in eastern Logan County, had been deepened 4½ feet to 5264½ feet and was drilling slowly ahead. This test, a wildcat four miles southeast of the Langston pool, has been shut in for several weeks awaiting pipe line connections. Its best production to date is 200 barrels per day by heads. Stanolind Pipe Line Company made the connections.

Taking Bottom-Hole Pressures at Fitts

Ada, Okla.—All wells in the Fitts pool of southeastern Pontotoc County were shut in on Friday, March 1, for bottom-hole pressure readings the following day. It is reported that pressure decline for the Bromide sand zone between January 1, 1935, and February 1, was approximately 100 pounds or approximately one pound of drop for each 2600 barrels of pipe line runs.

Magnolia Petroleum Company's T. Norris 1, SW SW NE 25-2n-6e, topped Bromide at 4160 feet, had first sand at 4242 feet, second sand at 4329 feet and was drilled to 4338 feet, where it was washed in for an initial yield of 460 barrels the first hour through casing and 189 barrels the second hour through tubing. W. A. Delaney et al's Hardin 3, NW SW NW 30-2n-7e, had the first Bromide sand at 4240 to 4255 feet, second Bromide at 4310 to 4351 feet and drilled eight feet into McLish at 4359 feet, where it yielded 719 barrels the first hour through casing and 210 barrels the second hour through tubing. Gas was estimated at 5,500,000 cubic feet. Stanolind Oil & Gas Company's Hardin 7, SE NW SW 30-2n-7e, was the third completion of the week when it topped Bromide at 3950 feet and drilled to 4208 feet for an initial yield of 741 barrels the first two hours through casing. Stanolind Oil & Gas Company's Norris 2, SE SW SE 25-2n-6e, completed late in January, 1935, for 376 barrels in two hours through tubing and having a current potential of 4294 barrels daily, was reported cutting from six to seven percent emulsion and about one percent of free water. This well is relatively near the southwest edge of production as now defined and near the fault which cuts through the southern portion of the pool.

Oklahoma City.—Since oil was discovered in December, 1928, in the Oklahoma City pool the municipal government of Oklahoma City has benefitted to the extent of nearly $2,100,000.00 in royalties and bonuses. Of this amount royalty payments have accounted for $1,648,000, acording to F. G. Baker, city auditor.

New Work Declines 50 Percent in Oklahoma

Tulsa.—New work took another sharp drop in Oklahoma during the week when scouts made 28 first reports from 11 counties compared to 58 the preceding week. Jackson County in the southwestern portion of the state was in the lead with six starts; Osage and Pontotoc counties were tied with five each; Pottawatomie County had three; Carter and Creek counties, two each; and Grady, Greer, McClain, Okmulgee and Seminole counties, one each. There was an inclination on the part of some observers to account for the recent decline of new activity by actions of the legislature where various proposals have been made to extract more money from the oil industry.

Twenty-two oil wells accounted for an increase of 29,270 barrels in the state's reserves while four tests were

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO COUNTY—		
English Drlg. Co., Wagner 1, ne nw sw 12-5-9w (otd 3502)	*	3455
CARTER COUNTY—		
Amos Drlg. Co., Epley 1, sw nw sw 4-1s-3w	*	2768
Smith & McDorman, Norton 2, nw nw se nw 32-2s-2w	2	318
Schimmerhorn, Fee 32, sw nw nw sw 5-4s-3w (otd 1535)	*	1676
COMANCHE COUNTY—		
W. A. Baker, Hodges 1, csl sw nw 31-2n-10w	*	150
H. W. Baker, Miller 1, se sw se ne 22-2n-13w	*	450
Oscar Jones, Sheets 1, ne ne sw 26-3n-10w	mach.	abn.
CREEK COUNTY—		
Bay State Oil Co. et al, Kemp 4, ne ne se nw 3-17n-8e	30	1405
Kemp 5, se se sw nw 3-17n-8e (pb 1431)	75	1854
Harmon 4, cel ne ne 9-17n-8e	250	1448
GARVIN COUNTY—		
Phillips et al, Riley 1, se se nw 2-4n-1w	*	5777
GRADY COUNTY—		
Carter & Magnolia, Harrison 1, cnw nw 28-3n-5w (pb 5200)	*	8963
C. E. Brace, Jolly 1, se nw sw nw 36-4n-8w	*	1970
LINCOLN COUNTY—		
Sinclair Prairie, Hoyt 1, nw sw ne 5-14n-3e	295	5113
The Texas Co., Gessman 2, cs½ sw se ne 33-14n-4e	185	3074
LOGAN COUNTY—		
Helmerich-Payne et al, Sturgis 1, se se nw 1-15n-2w	*	6175
NOBLE COUNTY—		
Stanolind et al, Voss 5, se ne se 28-22n-2w	3684	4867
OKMULGEE COUNTY—		
Turner & Sons, Hope 1-A, se nw nw 11-11n-13e	lcn.	abd.
Trident Oil Co., Harris 1-B, cwl ne ne 1-14n-14e	8	1120
OSAGE COUNTY—		
Texas Co., L. Kohpey 3, se se se ne 29-25n-8e	32	2490
C. Revard 2, se ne sw 17-21n-10e	96	2512
J. W. Field, 1-A, nw ne se 11-21n-11e	rig	abd.
Barnsdall Oil Co., 24, cwl ne 30-21n-9e	10	393
Johnson O&R Co., 8, nw nw nw se 30-21n-9e	105	334
W. C. Norris, 7, nw sw ne se 29-21n-11e	*	1952
E. O. Platter, 2, nw sw nw se 14-22n-8e	*	615
Valley Osage Oil Co., 6, se nw nw nw 18-22n-9e (otd 2321)	160	2615
J. A. Stuart, 1-A, sw ne ne sw 34-26n-9e	20	2057
Frakes & Kennedy, 6, se ne sw se 20-26n-11e	20	1572
PAWNEE COUNTY—		
Schauble, Schauble 1, ce½ sw ne 6-20n-8e (otd 1148)	*	1260
PITTSBURG COUNTY—		
W. E. Hailey, Drew 1, nw nw sw 21-3n-14e	*	190
PONTOTOC COUNTY—		
Stanolind, Norris "E" 4, sw nw se 25-2n-6e	¶5-18,375	4316
Southern Oil Corp., Ladd 1, cnw nw 27-3n-7e	*	2417
Texhoma Oil Co., Miller 2, sw nw se sw 27-5n-6e	spd &	abn.
POTTAWATOMIE COUNTY—		
Bishop Oil Co., Zoller 2, nw ne ne 6-6n-5e	847	4203
Manhattan, Littleton 2, se sw nw 20-9n-5e	302	4212
SEMINOLE COUNTY—		
Winona et al, Myers 3, cn½ ne sw ne 31-7n-8e	4432	4216
Carter, I.T.I.O. 2, ce½ nw nw 11-9n-6e	330	4051
Phillips, Fixico 2, se sw sw 23-9n-6e (otd 4313)	*	4031
STEPHENS COUNTY—		
Castle Oil Co., White 1, sw se se se 10-2s-5w	9	860
T. H. McCasland, Franklin 1, nw nw sw nw 4-2s-8w	3	2233

*Failures; †Junked; ¶Million cu. ft. gas.

abandoned without reaching beyond the spudding stage. One was a machine abandoned, one a location abandoned, one a rig abandoned and one test spudded and abandoned. The completion report included 15 dry holes, a total of 41 completions. Drilling footage also took a sharp drop when the 41 completions involved only 83,191 feet of drilling, including 546 feet in three old wells. Among the completions were six wildcat tests which resulted in one small oil well, a machine abandoned and four dry holes, all of which involved 23,118 feet of drilling.

Polo Edge Well Has Difficulties

Perry, Oklahoma. — Sinclair Prairie Oil Company still was meeting with very little success in attempts to complete Smith 3, SE NE NE 28-22n-2w, on the northwest edge of the Polo pool seven miles northwest of here in western Noble County. This well was drilled to 4955 feet where it swabbed from 85 to 90 barrels per day and made some water. It was first plugged back to 4935 feet, then to 4930 feet and shot with 40 quarts from 4902 to 4930 feet. Immediately after shooting it swabbed 125 barrels but when cleaned out to bottom yielded only 57 barrels on the swab.

The same operator's Kreithe 1, C SE NE 28-20n-2w, in the East Lucien pool of southwestern Noble County, had a small showing of oil in Simpson dolomite topped at 5090 feet and was drilling below 5098 feet. Shell Petroleum Corporation's Tate 1-A, C NW NW 29-20n-2w, set eight-inch casing at 4970 feet and was drilling out cement at 4965 feet with total depth at 4983 feet.

Logan County

Guthrie, Okla. — Slick-Urschel Oil Company et al's Pennington 1, C SW NE 10-16n-1w, wildcat test six miles east of here in eastern Logan County, topped the Layton series at 3745 feet and was drilling below 3925 feet. In the southwestern portion of the county, 4½ miles southeast of the town of Navina, Sinclair Prairie Oil Company's and Slick-Urschel Oil Company's Koatsch 1, SW SW SW 23-15n-3w, encountered top of the Oread lime at 3740 feet and was drilling below 4300 feet.

Lusk, Wyo.—Ohio Oil Company's Agnes Rohlff 2, NE SE 32-35n-65w, a Sundance test in the Lance Creek oil field, Niobrara County, eastern Wyoming, is drilling at 3284 feet.

Steinle Pool Gets Largest Completion

Russell, Kansas.—Tom Palmer has the largest completion in the Steinle pool of Russell County in his Steinle 3, CWL SW 22-13s-14w, which pumped 1848 barrels in 24 hours from 3278 feet in siliceous lime. Palmer is the discoverer of the Steinle pool. The same operator's Killian 3, NW SW NW 27-13s-14w, one mile south of the Steinle pool, made 1506 barrels after acid treatment in Siliceous lime drilled to 3281 feet.

Smoky Hill Oil Company's Miller 1, NW NE NE 31-14s-13w, second test to find production in a new sand horizon in the Hall pool of Russell County, pumped 597 barrels of oil in 24 hours from 3155 feet. It formerly produced from Oswald lime at 3043 feet.

Barton County

Albert, Kansas.—Treleaven & Brimm's Haas 1, SW SW SW 30-18s-15w, western Barton County discovery well, established a new potential during the week when it yielded 320 barrels in 24 hours from sandy congolmerate drilled to 3613 feet. It originally produced 251 barrels when completed about the middle of last month.

Kansas Potential Is at Record High

Wichita, Kansas.—As of March 1, 19,486 wells in approximately 100 Kansas pools had an official potential rating of 472,438 barrels, the highest rating in the state's productive history. Production now is being obtained from 42 of the state's 105 counties. Since February 1 of this year 56 wells have been completed and the potential boosted 42,786 barrels per day.

Vernon Oil & Gas Company and I. W. Murfin have staked a new wildcat operation at Beck 1, NE NE NE 32-15s-14w, 12 miles west of production in the Sellens pool in southwestern Russell County.

Large Well Completed In Rantoul Gas Field

Rantoul, Kansas.—Extensive development of shallow production of both gas and oil in southeastern Franklin County and southwestern Miami County around Rantoul does not follow the narrow shoestring trend prevalent in this area. Development seems to range along the course of the Marias de Cygnes River. Indications are that this producing horizon is a former shoreline and production is not confined to a channel trend. Gas and oil have been found over a large area.

In Franklin County, J. W. Lemmons and Sons have completed Bert Heminger 2 for the largest gas producer found in the field this year. It tested 6,700,000 cubic feet open flow. This well is located one mile north of Rantoul in Section 21-17-21e, and is a direct offset to the discovery well of the new Rantoul field, which was opened last year. This makes 17 producing wells with a total open flow of 40 to 50 million cubic feet. Depths run from 645 to 700 feet, which is the Bartlesville horizon.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Treleaven et al, Haas 1, sw sw sw 30-18s-15w	251	3613
ELK COUNTY—		
Hunt & Craft, Hyde 1, sw sw nw 17-30s-9e	*	1000
White Star, Manes 1, se ne ne 22-31s-10e	12	1647
ELLSWORTH COUNTY—		
Slick, Pryor, Lockhart & Darby Oil, Breford 3, nw sw nw 7-17s-10w	*	3405
GREENWOOD COUNTY—		
Young & Reynolds, Adams 1-A, nw se sw ne 7-22s-13e	*	1100
HARVEY COUNTY—		
Shell, Voth 7, nw sw nw 4-22s-3w	1307	3525
Schmidt 3, cw½ w½ sw 17-22s-3w (otd 3208)	332	3495
MARION COUNTY—		
Harwood, Cowman 4, se ne sw 11-17s-4e	202	2381
McPHERSON COUNTY—		
Breslin, Akeson 1, ne se ne 27-19s-2w	*	2990
Shell, Johnson 6, csw 35-19s-3w	195	3050
Jones, Flock 3, ne se ne 1-20s-2w	64	2966
Stafford et al, Krehbiel 1, nw nw se 21-21s-3w (otd 1950)	*	2080
RENO COUNTY—		
Barnsdall, Sabin C 7, se sw se 11-23s-4w	2550	3606
Sabin C 8, sw se se 11-23s-4w	1107	3607
Olson Oil Co., Blake 4, sw se sw 23-23s-4w	1432	3609
Olson Oil Co. & Shell Pet. Corp., Duckworth 6, nw ne ne 23-23s-4w	*	....
Olson Oil Co., Krehbiel 1-B, ne nw nw 26-23s-4w	4712	3599
Goering 6-B, sw sw nw 35-23s-4w	1624	3590
Kessler, Thier & Skelly Oil Co., Bigger 1, ne se sw 29-23s-6w	*	4141
RICE COUNTY—		
Continental Oil Co., Lansing 1-A, ne ne sw 25-18s-8w	1132	3234
Shell et al, Ploog 3, cel e½ sw 33-18s-9w	974	3221
Sinclair Prairie, Wallace 3, sw sw sw 29-19s-9w	*	....
Davis et al, Duesser 1, cw½ ne sw 31-19s-10w	1097	3285
Sinclair Prairie, Thompson 6, ne se nw 21-20s-10w	837	3346
RUSSELL COUNTY—		
Streeter-Stearns, Blarsley 1, nw nw se 22-13s-14w	212	3372
Aylward et al, Streek 1, sw nw ne sw 27-13s-14w	308	3291
Holland 3, se ne ne 28-13s-14w	220	3311
Hartman & Blair, Sullivan 1, ne ne se 2-14s-15w	222	3068
Bridgeport, Miles 6, nw se ne 4-14s-15w	294	3104
Central Pet. Co., Benso "A" 2, ne ne sw 4-14s-15w	622	3086
Wolf Creek Oil Co., Mills 1, sw sw sw 10-14s-15w	*	3307
Wolf Creek Oil Co. et al, Donovan 1, sw sw se 10-15s-15w	153	3200
SEDGWICK COUNTY—		
Stearns et al, Stearns 1, ne ne se 17-25s-1e (otd 3337) (pb 2621)	*	3495
Shell, Fisher 2, se ne se 15-26s-2e (otd 3202)	43	3324

*Failures; †Junked; ¶Million cu. ft. gas.

Camp Hill Test, Anderson County, Is Flowing Oil

Palestine, Texas. — Gulf Production Company's completed wildcat gasser on the Camp Hill structure, situated in southwestern Anderson County, has developed a flow of dark green oil estimated at 40 barrels daily in supplying gas for fuel in drilling a second test about one mile to the south. This conversion adds weight to the prospects of the Camp Hill area becoming an outstanding strike for the current year. The oil tests 54 gravity, and at first was classed as distillate.

The company's second test on the structure, located on Mary J. Ross 54.7-acre tract, Robt. Erwin Survey, logged Pecan chalk at 3766-3970 feet, with an elevation of 484 feet, indicating a higher structural position and thinning of the section, possibly due to local faulting. The discovery well was completed late in January rated at 10,000,000 cubic feet of gas daily, with 1950 pounds closed-in pressure on casing and 1850 pounds on tubing, after plugging back from Georgetown lime at 5969 to 5059 feet. It is credited with producing from the Sub-Clarksville sand member of the Eagleford shale, with salt water showing in Woodbine sand section at 5176-5948 feet. The discovery well is about 4½ miles northeast of Elkhart.

Operations are slated to get underway early this week on a wildcat block held jointly by Gulf Production Company and Humble Oil & Refining Company in the extreme southwest part of Anderson County. This project is located in the northwest corner of the O. G. Rogers 475-acre tract, Daniel Parker Survey, about five miles southwest of Elkhart and 4½ miles northeast of Sun Oil Company's Robt. Erskine 1, which was abandoned in salt water sand at 5874-5902 feet.

The Rusk pool, Cherokee County's one-well area, is to be given a third test by T. J. Wood, Young et al, who developed flowing production from the Woodbine in completing New Birmingham Development Company 1, Levi Jordan Survey, last June 3, rated as a big oil producer from sand at the 5100-foot level. The discovery well developed a high percentage of salt water when flowed into lease tanks one week later, and experienced a series of mishaps that required sidetracking and redrilling of the sand. Their second test, a southwest offset, failed to show oil or gas in drilling to 5163 feet, where it was abandoned in August. Materials have been moved in to drill New Birmingham 3, located 330 feet south and east of the discovery well, which has produced about 43,000 barrels of pipe line oil. Recent reports credit this producer with flowing 215 barrels of fluid daily, including about 60 percent bs&w.

Operations have been started by Dr. Garland and associates on a wildcat in western Smith County and about 3½ miles east of the Van field. The test is in the southeast corner of the J. W. Bartlett tract, R. G. Stewart Survey, A-955, about one mile southeast of Jamestown. It also is about one half mile east of A. G. Deck and W. L. Cloud's Dora Kendall 1, which is preparing to resume operations at 1270 feet. W. R. Harrison et al have taken over R. W. Fair et al's W. P. Rushing 1, Jacob Herrin Survey, about 1½ miles southeast of Whitehouse to test Woodbine section at 4300-4330 feet that is reputed to have indicated some evidence of oil saturation when an electrical formation testing device was used. The new owners have cemented 5½-inch pipe at 4295 feet after plugging back from 4673 to 4330 feet. It has an elevation of 393 feet. Clark et al have made location on the Hapgood-J. T. Irwin tract, George May Survey, about five miles northeast of New Salem, Rusk County, to drill to the Woodbine horizon on a block of about 3000 acres.

Counties in Northeast Texas adjacent to the Oklahoma border are again attracting attention, and the scene of a limited volume of lease trading. In the northwestern part of Red River County, J. S. Abercrombie Company and Harrison Oil Company, Houston, are expected to continue their exploration campaign as a followup to the accumulation of an extensive block of leases. Their activity is apparently based on the theory that production will be gained from horizons below the Georgetown lime, or in the lower Trinity sand series, as three tests have been drilled below the Georgetown lime within the past four month, with the first two abandoned in the latter formation near the 1100-foot level. J. M. Roberts 1, the latest test, was recently plugged in dry sand logged at 2065-2075 feet, with an elevation of 424 feet. It is located on the John Ware Survey, about eight miles north of Clarksville, and the immediate area will likely be given the next test, as a good show of black heavy oil was logged in sandy-shale at 1120-33 feet, or about 400 feet below the top of the Georgetown lime.

Three tests for Bowie County are contemplated by J. Ben Russell, Oklahoma City, and associates in the event they are successful in assembling drilling blocks lying west of New Boston, about two miles east of DeKalb and near Nash. Two new tests for Morris County are in prospect. Marydun Oil & Gas Company, Oklahoma City, owner of a 5700-acre block, and Sterling Oil & Gas Company, which holds leases on about 2700 acres, both centering about 4½ miles northwest of Daingerfield, have joined in making a test of the Woodbine zone. Derrick has been erected to drill in the southeast corner of the T. C. Conner 1000-acre lease, M. W. Mathews Survey. Ginsberg et al are assembling a block about five miles northeast of Daingerfield to drill a shallow test near H. N. H. Drilling Company's E. Hall 1, Levi Jordan Survey, which was abandoned last October at 4000 feet.

Large Companies Hold Little Border Area Leases

Marshall, Texas.—Although a number of independents have wildcat holdings in the East Texas border counties, major companies have comparatively little, according to figures compiled to January 1, 1935.

Following are the wildcat holdings by major companies in five East Texas border counties:

Harrison County — Gulf Production Company, 2369 acres; Magnolia Petroleum Company, 8937 acres; The Texas Company, 2400 acres; Shell Petroleum Corporation, 1024 acres; Cities Service, 6947 acres; and Pure Oil Company, 60 acres.

Marion County—Gulf Refining Company, 4297 acres; Magnolia Petroleum Company, 3560 acres; The Texas Company, 2575 acres; Sun Oil Company, 626 acres; Cities Service, 11,500 acres; Simms Oil Company 280 acres.

Panola County—Magnolia Petroleum Company, 12,316 acres; The Texas Company, 4800 acres; Sun Oil Company, 3120 acres; Cities Service, 7150 acres; and Marathon Oil Company, 780 acres.

Sabine County—Gulf Refining Company, 10,500 acres; Magnolia Petroleum Company, 5620 acres; The Texas Company, 800 acres; Sun Oil Company, 4780 acres; and Continental Oil Company, 150 acres.

Shelby County—Magnolia Petroleum Company, 16,400 acres; The Texas Company, 1800 acres; Amerada Petroleum Company, 360 acres; and Stanolind Oil & Gas Company, 200 acres.

Arkansas Fuel Oil Company has a seismograph crew working in Gas County near Kildare and two magnetometer crews are also working in that county.

Completions in East Texas Still Gaining

Tyler, Texas.—The East Texas field added 82 oil producers during the past week. There also was one junked hole. Volume of completions has been gaining since the first of the year, and for the past four consecutive weeks 80 or more new oil producers have been placed on proration with an average allowable of about 27 barrels daily.

Productive acreage also has registered substantial gains lately, with several important extensions for the northwest flank of the structure in Upshur County. C. R. Trail et al's C. T. Shelton 1, SWc of 42¼-acre lease, Wm. King Survey, proved up a number of new locations in flowing at rate of 60 barrels hourly through two-inch choke from sand at 3702-3710 feet. The well has a sub sea depth of 3318 feet. Howard Russell et al's J. C. Salter 1, SWc of lease, Wm. King Survey, showed for an average producer when given preliminary test in sand at 3766-71 feet, or 3321 feet below sea level. This outpost well proves up the remainder of Sun Oil Company's T. C. Ramey 86.54-acre lease, and the latter is also starting offsets on its S. C. Salter 20-acre "A" lease and S. C. Salter 27-acre "B" lease.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Big Indian Synd, T. B. Reese, rec., Wolford 9 (40-ac)	9600	3742
Bristol-Duncan & White, Tucker 1	7200	3628
Champlin & Bass, L. J. Pinkston 3 (10-ac)	7000	3640
Coastal Drl. Co., Ras Pool 2 (9-ac)	7500	3772
R. H. Dearing & Sons, E. McDavid 5 (78-ac)	†	3725
Florence Oil Co.-W. H. McConnell, L. Jackson 2 (27.4-ac)	4500	3829
Gulf, E. E. Thrash 9 (83.56-ac)	8000	3707
W. B. Hamilton Pet. Co., L. A. Grambell 10 (54.7-ac)	8600	3692
Humble, R. E. L. Silvey 48-A (458.97-ac)	7800	3680
Heywood White 5-A (38¾-ac)	7000	3723
Magnolia, Fulgham-Wright 24 (166-ac)	10,000	3710
Marathon, D. Ledbetter 20 (212.48-ac)	8000	3690
E. E. Moores 23 (201.4-ac)	8000	3693
Albert Nathan et al, Deason 2 (5-ac)	5000	3700
Octo Oil Corp., Maxwell 1	480	3684
Primrose Pet. Co.-W. B. Hamilton, Camp 3 (7½-ac)	300	3675
Sinclair Prairie, W. D. Kinney 58 (579.2-ac)	9000	3646
Peter Tipps 15-B (84-ac)	8500	3622
Dora Wright 21 (152.1-ac)	9000	3743
Dora Wright 22 (152.1-ac)	9000	3757
Dora Wright 23 (152.1-ac)	9000	3743
R. G. Wright 15 (107.62-ac)	8500	3682
Sneed & Moseley, A. L. Towns 1	4600	3804
Sun Oil Co., J. J. Denton 8-A (114.12-ac)	3000	3747
Texas Co., J. W. Wilson 14 (134¾-ac)	6500	3661
Texas-Jersey Oil Corp., W. P. Keeling 2-B (1-ac)	7000	3799
Tide Water, J. M. Shaw 11 (80-ac)	8500	3760
KILGORE AREA—		
Atlantic, S. G. Andrews 15-A (83-ac)	8400	3641
Devonian Oil Co.-Gulf, Motley 31 (442.1-ac)	9800	3693
C. A. Everts Drl. Co., P. C. Warren 2 (22-ac)	10,000	3847
Gulf, M. R. Terrell 7 (60.26-ac)	8000	3607
Humble, S. S. Laird 66-B (568.53-ac)	8500	3642
Mary E. Minor 12 (123.7-ac)	9600	3716
John E. Mabee Consolidated Corp., M. T. Cole-Shell 21 (120-ac)	10,500	3559
Magnolia, J. C. Bradberry 15 (90-ac)	9200	3671
E. H. Moore et al, W. P. Moore 5 (23-ac)	7600	3667
Navarro Oil Co., R. N. Brightwell 16 (113.08-ac)	7500	3638
Rancho Oil Co., H. R. Crim 2 (1.3-ac)	4600	3594
Yandell Rogers et al, S. Butts-Holland 1 (25.7-ac)	500	3670
Shell, J. Douglas 12-A (94.45-ac)	8200	3645
W. P. Moore 17 (140-ac)	8000	3683
Sinclair Prairie, M. T. Cole 45 (666-ac)	8000	3587
M. T. Cole 47 (666-ac)	6800	3598
M. T. Cole 48 (666-ac)	7000	3607
M. T. Cole 49 (666-ac)	7500	3581
M. T. Cole 50 (666-ac)	7200	3582
Southport Pet. Co., I&GN Ry. 2, Lse 1	5600	3585
Sun, Calvin Brown 10 (100-ac)	10,400	3621
Texas Co., H. T. Elder 24 (53½-ac)	6000	3597
Tide Water, M. G. Barton 22 (194-ac)	9700	3555
Weaver-Crim Corp., Ben Laird 12 (82-ac)	10,000	3625
LONGVIEW AREA—		
O. C. Bailey & Trimble, Geo. Jones 6 (15-ac)	10,000	3611
East Mountain Prod. Co., C. T. Shelton 3 (31-ac)	1500	3730
Empire G&F Co., J. W. Akin 13 (100-ac)	11,000	3606
Faith Oil Corp., B. B. Fenton 8 (52.4-ac)	7500	3689
FHE Oil Co. et al, B. C. Christian 17 (88-ac)	8600	3710
Gulf, M. F. Barker 8 (74.52-ac)	7000	3574
F. M. Fonville 11 (100-ac)	9000	3559
J. C. Judge 66 (518.3-ac)	8400	3528
Humble, J. F. Bowles 17 (100½-ac)	8500	3635
Idaho Oil Co., Landers 2	7000	3665
Magnolia, L. J. Everett 25 (166.96-ac)	9000	3641
J. W. Free 24 (169.3-ac)	8800	3649
J. W. Free 26 (169.3-ac)	10,500	3683
F. W. Merrick, Inc., W. R. Nicholson 9-A (96-ac)	7200	3666
G. P. Mitcham & Geo. L. Pace, A. D. Adkins 4 (51.7-ac)	9200	3791
Morgan & McMinn, H. Foster 2 (7-ac)	9800	3585
B. F. Phillips et al, L. P. League 7-B (24.9-ac)	8800	3576
Reprimo Oil Corp., G. E. Fenton 2 (5-ac)	6500	3611
Roeser-Pendleton, Inc. et al, J. T. Hopkins 6 (25½-ac)	8200	3562
W. R. Nicholson 11-A (94-ac)	7000	3684
Selby O&G Co.-Lewis Prod. Co., L. C. Ingram 9 (80-ac)	9600	3550
Shell, C. C. Landers 18 (206¾-ac)	2500	3662
Sinclair Prairie, J. W. Akin 12-A (96-ac)	10,400	3600
M. Moncrief 38 (307.7-ac)	10,500	3615
Simms - Stanolind, Flewellen 34-B (374-ac)	6500	3706
C. Bascom Slemp et al, J. N. Tuttle 4 (40-ac)	5000	3539
Sun-Texas Seaboard, S. J. Rollins 14 (87-ac)	10,000	3595
Tide Water, J. J. Castleberry 16 (202-ac)	7000	3602
Arch Davis 15 (133.8-ac)	9800	3553
United East & West Oil Co., C. T. Shelton 2 (56-ac)	1500	3735
J. E. Watts et al, Eve O'Byrne 3 (144.6-ac)	2000	3772
Yount-Lee, W. I. Denson 6-B (21.22-ac)	9000	3648
VAN ZANDT COUNTY (Van Field)—		
Humble, L. V. Freeman 4 (31½-ac)	175	2951
R. S. Blake 17 (201.4-ac)	3500	2900
WILDCATS		
FREESTONE COUNTY—		
F. A. Gillespie & Sons, J. B. H. Orand 1	*	4411
RED RIVER COUNTY—		
J. S. Abercrombie Co.-Harrison Oil Co., J. M. Roberts 1	*	2075
ROBERTSON COUNTY—		
Steen Drl. Co., Dr. W. M. Manness, H. A. Sackville 1	*	5340
VAN ZANDT COUNTY—		
Joe Cadrin et al, J. F. Bass 1	*	1700
J. K. Wadley et al, W. J. Carnes 1	*	4752

*Failures; †Junked; ¶Million cu. ft. gas.

Van Allocation Method Revised

Austin, Texas.—The Texas Railroad Commission has issued a new proration order on the Van field, Van Zandt County, revising the method of allocation. The new order became effective on March 1, 1935.

The field allowable is allocated on the basis of acre feet of Woodbine sand and the weighted average reservoir pressure, the allocation to each well being calculated on the basis of 50 percent for each of these factors.

This plan was proposed at the statewide proration meeting held in Austin on February 18, and is designed to make a reasonable allowance for the variation in potential between the wells in the field.

Charles I. Francis, attorney for Pure Oil Company, principal operator in the field, announced at the hearing that the plan was acceptable to his company.

Gordon Griffin, chief petroleum engineer for the Texas Railroad Commission, said that the revision would make little difference in per-well allowances, except for a few wells.

Under previous orders the commission allocation was based on the number of acre-feet of Woodbine sand assignable to each well. No other factor was considered.

Production quotas for prorated leases in the Van field have been apportioned on a per acre-foot basis since October 16, 1931, and prior to this date lease allowables were fixed on a basis of acreage and potential rating of 40-acre unit on 11/16-inch choke. Covering an area approximately 4400 acres, with 455 wells in the Woodbine zone, the field is credited with approximately 1,167,000-acre-feet of Woodbine formation above a sub-sea datum of 2500-feet, the accepted danger level for bottom hole water throughout the greater part of the structure.

Adoption of the bottom-hole pressure

factor along with productive acre-feet of Woodbine was not protested by Pure Oil Company, principal owner and in charge of the operation of all unitized leases. With proper consideration given the low pressure areas that have appeared from unbalanced withdrawals it is believed that better control can be had over salt water encroachment. The average Woodbine thickness above the 2500-foot contour is about 285 feet, while the maximum is 650 feet.

Texas Drilling Permits Increase

Austin, Texas.—The Texas Railroad Commission last week approved the drilling of 370 new wells in Texas. This is almost twice the number usually approved each week during the past few months.

In East Texas alone, permits for 183 wells were allowed. This group, however, represents an accumulation of about two weeks. There were 76 permits for new wells in Rusk County, 70 in Gregg County, 20 in Upshur County, and 17 in Smith County.

Southwest Texas reported increased activity with 51 new wells allowed. There were 12 in Bee County and 11 in Duval County. In the adjacent Gulf Coast area permits for 22 new wells were granted.

North Texas reported 49 new permits, with 29 in Archer County and 16 in Young County. In West Central Texas, immediately adjacent to North Texas, only nine new locations were listed.

In the Panhandle area 27 new permits were listed, of which 11 were for new wells in Wheeler County, while 10 were for wells in Gray County. The remainder of West Texas reported 20 new permits.

North Texas Oil Association to Meet

Wichita Falls, Texas.—Fifth annual meeting of the North Texas Oil & Gas Association will be held here March 9. Invitations have been extended to a number of prominent oil men in the Southwest to be guests of the officers of the organization, according to Fred Schmann, secretary-treasurer, at a banquet to be held at 6:45 p. m. Wm. McCraw, attorney general of Texas; Col. E. O. Thompson, chairman of the Railroad Commission, and Wirt Franklin, president of the Independent Petroleum Association of America, have tentatively accepted invitations to make short addresses.

L. L. MOTES of Motes & Bedingfield, left San Antonio last week for a business trip to Augusta, Ga.

New West Texas Field Likely; Test at Record Depth

San Angelo, Texas.—Record drilling depth honors were destined to be gained by Texas towards the close of last week as result of the Gulf Production Company's J. T. McElroy 103, Upton County section of West Texas, having proceeded to the 11,366-foot level, logging white lime and chert. Due to the formations softening considerably more than 250 feet of new hole was made within the past week, with 31 feet drilled by the three company-manned rotary crews on the lastest daily report. The crews are cutting a 6 11/16-inch diameter hole, and are carrying open hole below 10,301 feet, where 7⅝-inch pipe was cemented last July. World record depth is credited to General Petroleum Corporation's Berry 1, Belridge field, California, which is in difficulty at 11,377 feet, while Oklahoma's bid is through the Denver Producing & Refining Company's Adah Noe 1, which is testing at 11,230 feet.

Deep oil production in West Texas other than the Big Lake field appeared promising last week in John I. Moore, Loffland Brothers et al's L. S. McDowell 1, C SE NE Section 22, Block 34, T. & P. Railway Survey, T-2-S, Glasscock County, made small heads of 43.7 gravity oil with small volume of gas through column of rotary drilling fluid at 9520 feet. Operations have been suspended to cement seven-inch pipe for a production test, as the hole is open below 2187 feet. Production is credited with coming from lower section of the Pennsylvania lime, comparable with the Ranger sand, and the oil showing has enhanced the possibilities of production being developed from the Ellenberger member of the Ordovician lime, the projected horizon. First lime was logged at 2137 feet, with an elevation of 2534 feet, and top of the Crinordal lime was called at 9471 feet. Gas was logged at 9484 feet, followed by oil showings at 9510 feet.

Skelly Oil Company et al's University-Grayson 1-D, south Reagan County, has cemented seven-inch casing at 9437 feet after topping the Simpson lime at 9400 feet.

Largest flowing production in West Texas outside the Yates field is credited to Gulf Production Company's Crier-McElroy 9, located on the east edge of the Gulf-McElroy field, as result of it responding to a shot of 240 quarts of nitro in lime at 2795-2857 feet with a flow of 401 barrels of 29.6 gravity oil per hour for more than four hours. This well was completed in March, 1932, at 2875 feet, flowing 1080 barrels natural, and had yielded more than 1,000,000 barrels when given the shot. Production had dropped to 160 barrels daily. Close proximity of the well to the brink of the structure is believed responsible for the unusual production performance.

Sid Richardson et al's M. J. Hill 1, semi-wildcat in southern Winkler County, has been completed flowing 30 barrels of pipe line oil daily after shot in 3100-foot sandy-lime horizon. The hole was plugged back from 3846 to 3200-foot level. Richardson et al's J. B. Walton-Pure 1, wildcat in northern Winkler County and about four miles southeast of the Scarborough field, is credited with registering a high structural position on upper markers, having logged first anhydrite at 1131 feet, with an elevation of 2940 feet. Frank M. Greene, Fort Worth, and associates have made location for J. T. Cross 1, Section 4, Block B-10, PSL Survey, a wildcat.

Exploration of a wildcat block in Reagan County and about 15 miles north of the Big Lake field is to be made by Byrd-Frost, Inc., Dallas, having made location for O. F. Boyd 1, C SE¼ Section 6, Block "E," L. & S. V. Railway Survey.

Landreth Production Corporation et al have started operations on one test and location made for another on their large leasehold in northwestern Ector County, surrounding Clarence Scharbauer 1, which opened a new pool last November from lime at 4108-86 feet after plugging back from sulphur water at 4236 feet. Frank Cowden 1, SWc Section 18, Block 44, T. & P. Railway Survey, T-1-N, located about 3¼ miles northwest of the producer, is to be drilled immediately, while work will begin within 45 days on Clarence Scharbauer 1-B, SEc NW¼ Section 13, Block "A," PSL Survey, situated about 1½ miles north of the discovery well. More than 20 sections are held under lease by the group, and their discovery well has remained shutin since completion for lack of a market outlet.

International Petroleum Corporation, Fort Worth, has started operations on White-Baker 1, NEc SE¼ Section 4, Block 207, T. C. Railway Survey, south offset to Gulf Production Company's discovery well on the White-Baker

ranch, Pecos County. The former acquired control of the 80-acre lease from Cardinal Oil Company, owner of an east offset test. Cardinal Oil Company was assigned this acreage by The California Company and Humble Oil & Refining Company for an unrevealed consideration after the discovery well was completed late in December flowing 52 barrels initial from lime at 1824-26 feet.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
R. A. Clampitt et al, Benson 1-A, sec 1397	*	1000
F. P. Cullum et al, Falls-Ellis 25, blk 10	15	1150
Continental Oil Co., Falls 9-B	10	1126
Conoco & F. P. Cullum, Falls 21	45	1137
J. T. Cumley et al, C. W. Clark 1, blk 13	*	1400
Dinney Oil Co., Harmson 5	5	855
W. B. Hamilton Pet. Co., Cartwright 16	125	1147
C. J. Kleiner et al, B. C. Andrews 14	*	985
Geo. L. Pace et al, C. L. Abercrombie 22, blk 156	75	1177
C. L. Abercrombie 23, blk 156	80	1184
Perkins-Cullum Oil Co., Falls 137, blk 5	200	1205
Falls 138, blk 13	50	1131
Falls 139, blk 5	100	1190
Falls 142, blk 5	150	1177
Rathke Oil Co., Bridwell-Archer 1, sec 1831	*	1003
Ray & Staniforth, T. B. Wilson 2-B	125	1615
J. G. Steele Drl. Co., O. L. Kunkle 1, sec 1419	*	1354
FOARD COUNTY—		
Baker Oils, Inc., and Jones & Stasney, J. W. Beverly 1, sec 469	*	3651
JACK COUNTY—		
Lundien et al, J. M. Bloodworth 6	4	321
Robt. T. Nail et al, W. Peterson 4	*	640
MONTAGUE COUNTY—		
O. V. Beck et al, Cobb 1	*	2025
W. R. Bourland et al, Mrs. F. E. Loy 1	*	1891
Bridwell Oil Co., T. Hoben 2	*	1618
Continental Oil Co., J. W. Lawler 6	170	1759
Lesh & McCall, C. L. Davenport 3	*	1671
WICHITA COUNTY—		
L. T. Burns et al, U. S. Beach 42	*	527
1st Nat'l Bank 12, sec 26	4	458
1st Nat'l Bank 13, sec 26	*	468
Burns and Long, 1st Nat'l Bank 24-D, sec 26	*	1657
Golding & Cochran, J. M. McFall 1	*	1825
King Royalty Co. et al, Waggoner Est. 3-J, sec 2	200	1565
Ed. Schlaffke et al, W. B. Honaker 2, sec 3	30	1067
WILBARGER COUNTY—		
Lawson & Leavell, Waggoner Est 1, sec 99	75	1651
YOUNG COUNTY—		
T. Abernathy et al, Yates 1, blk 1	*	439
J. T. Cox et al, W. H. George 1, sec 106	*	750
S. D. Glover et al, C. W. Johnson 15, blk 10	3	527
B. N. Honea et al, fee 10, sec 1492	10	941
King Royalty Co., J. T. Lowe 1, sec 2244	*	725
H. R. Loftin et al, J. M. Nall 1, sec 1997	*	505
N. H. Martin & Son, Belknap-Ward 1, sec 2248	100	603
E. R. Stilley et al, O. S. Perkins 3, sec 206	*	778
Stuckey O&G Co., G. Rothel 1, sec 217	*	931
E. C. Stovall et al, fee 16, blk 41	¶1-50	4233

*Failures; †Junked; ¶Million cu. ft. gas.

Abandoned as a failure more than a decide ago, this well with its makeshift derrick gives the Sanger area, Taylor County, Texas, its first commercial oil producer after an experimental treatment with acid solution developed an output rated between 50 and 75 daily from lime at the 1900-foot level. Clarco Oil & Refining Company, Fort Worth, has taken over operations, and is installing modern pumping equipment.

West Texas Initial Output 4230 Barrels

San Angelo, Texas.—An aggregate of 4230 barrels of new production was gained by West Texas last week through the completion of 12 producing wells. There also were two dry holes, both situated on the edge of producing areas in Howard and Mitchell Counties.

West Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
FISHER COUNTY—		
Roeser-Pendleton, Inc., T. E. Hill 1, Sec 203	195	3135
GLASSCOCK COUNTY—		
Continental Oil Co.-Group 1 Oil Corp., Settles 14	370	2555
H. O. Wooten et al, S. Turner 2-B	1585	2262
HOWARD COUNTY—		
The California Co., A. M. Bell 4	325	2803
Herschbach Pet. Corp., J. P. Davis 3-A	480	2822
Humble, W. R. Settles 10	*	2699
Mid-Continent Pet. Corp., L. C. Denman 3	245	2815
Philips Pet. Co., R. Lane-Davis 2	200	2776
Pure Oil Co., Otis Chalk 15	190	1880
MITCHELL COUNTY—		
Harry Adams Corp., P. K. Mackey 1	*	3054
PECOS COUNTY (Yates field)—		
Continental & Stanolind, J. H. Tippett 4-C	50	1368
WARD COUNTY—		
Atlantic O.P. Co., Camp-Black 3	30	2620
California Co., B. D. Durgin 23	365	2556
Sid Richardson et al, Johnson-Sun 16-B	195	2590

*Failures; †Junked; ¶Million cu. ft. gas.

Wheeler County Gets Large Well

Pampa, Texas.—Western Wheeler County retained the spotlight the past week in registering a 3125-barrel flowing well when Champlin Refining Company's Edes-G. W. Williams 1-A, NWc E½ SE¼ Section 49, Block 24, H&GN Ry. Survey, drilled 30 feet into granite-wash pay topped at 2510 feet. The well also made 13,000,000 cubic feet of gas with the oil. It is located on the south flank of the prolific area, and is a south offset to Phillips Petroleum Company's A. K. Lela-Williams 5, which recently scored an initial flow of 4605 barrels of oil in 19¾ hours and 4566 barrels the next 24 hours at a total depth of 2530 feet.

Six wells were completed in the Texas Panhandle last week, including four oil wells with a combined initial yield of 4690 barrels. There were two gassers listed as completions. New gas production was estimated at 55,150,000 cubic feet.

Gathering System in North Texas Purchased

Wichita Falls, Texas.—Gulf Pipe Line Company has purchased about 50 miles of crude gathering lines operated by Humble Pipe Line Company in North Archer County, southwest Wichita County and eastern Wilbarger County for a consideration of $25,000. The purchaser also receives crude connections amounting to about 900 barrels daily from 295 wells on 53 leases in the Holliday, KMA and Electra fields. The pipe line system involves two-, three- and four-inch pipe, but does not include Humble Pipe Line Company's trunk line unit.

Wichita Falls, Texas.—Dry holes almost equaled the number of producers credited to North Texas last week. There were 43 completions, including 21 failures, while the 22 oil wells afforded a combined initial output of 1622 barrels daily.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GRAY COUNTY—		
Bell O&G Co., L. H. Webb-Morse 5, lse 2	45	2575
HUTCHINSON COUNTY—		
Dixon Creek O&R Co, Johnson 1-C	¶15.9	2850
WHEELER COUNTY—		
Champlin Ref. Co., Edes-G. W. Williams 1-A	¶13-3125	2540
Christie-Hickman Drl. Co., T. J. D'Spain 6	¶2-1095	2500
Mudge Oil Co., M. Mertel 1	¶20¼	2090
Shell, W. B. Bush 6	¶4-425	2539

*Failures; †Junked; ¶Million cu. ft. gas.

Area North of Sinton to Be Tested

San Antonio, Texas.—Heep Oil Corporation's Welder 1-B, about a mile south of the Sinton field, San Patricio County, is drilling at 5615 feet. This well made a small producer at 5449-55 feet (corrected sand record), but the pressure was too low. For a short while, it was jetting at the rate of 10 barrels an hour.

Plymouth Oil Company's Welder 2-B, southwest of the field, has encountered trouble with a caving hole. It was drilled to 6854 feet, plugged back to 5100 feet and sidetracked. The bit went into the old hole and the well was again cemented back. Now attempts are being made to get on bottom.

Plymouth Oil Company is to develop another portion of its big Welder lease. Location has been made about eight miles north of the field for Welder 1-C, 2000 feet from the north and east lines of Section 49, re-subdivision of the Welder ranch. The contract has been let to Al Buchanan for a deep test. The well will be about three miles southeast of the Aransas gas area.

Stanolind Oil & Gas Company is tied up with a fishing job on J. J. McMillan 1, southwest of Sinton. The depth is 4018 feet.

Humble Oil & Refining Company's Welder 1, west of the Angelita field, tested 1400 feet of salt water in ten minutes at 5330-82 feet in the Angelita sand, and is now drilling at 5612 feet.

Lee County

San Antonio, Texas.—Humble Oil & Refining Company's J. Simons 1, Lee County wildcat near the town of Livingston, has been abandoned at 4728 feet in the Edwards lime. The well, in the R. H. Hunter Survey, had the top of the Austin chalk at 3897 feet, base 4349 feet, Top Eagleford 4350 feet, top Buda 4409 feet, top Del Rio 4500 feet, top Georgetown 4514 feet and top of the Edwards lime at 4717 feet.

Wildcatting at Peak in Bee County

San Antonio, Texas.—Wildcatting has reached the highest peak in the history of Bee County with two types of production being sought in a number of wildcats. Pettus sand and Hockleyensis production are being sought in more than a score of interesting wildcat tests in the general area.

Caesar, West Tuleta and Dirks pools, are Pettus sand areas now in process of development, while Foley area is an important new Hockleyensis sand strike.

The Foley district, recently discovered by Dirks Brothers, likely will be underway to an immediate development following a deal for sale of a quantity of gas from the area. A pipe line is being laid to the Dirks pool from this well to tie into the Live Oak Gas Company's pipe line to Three Rivers. The gas also will be available to the Dirks pool for drilling purposes, also starting a development campaign.

Pearsall Test Is Flowing

San Antonio, Texas.—Amerada Petroleum Company's Halff & Oppenheimer 2, Frio County test in the Pearsall area, is jetting 98 barrels of oil per day after being re-worked. It was drilled too deep into the sand, being bottomed at 3931 feet, and made salt water. Plugged back to 3926 feet, the water has been cut off and the well is producing some oil.

Samfordyce Pool Gets Several Minor Extensions

San Antonio, Texas.—Several minor extensions were provided to the Samfordyce field, Hidalgo County, during the week through the completion of new producers. Following these successful completions, offset wells have been made on outpost locations.

Cortez Oil Company's C. E. Smith 3, Tract 278, Porcion 41, flowed 18 barrels per hour through ⅛-inch choke, showing 280 pounds tubing pressure and 475 pounds casing pressure. Gas sand was logged 2746-59 feet, shale 2759-64 and oil sand 2764-69 feet with casing set atop the last five feet of sand.

Gem Oil Company's Seabury et al 1, Tract 256, Porcion 38, made six barrels per hour through 3/16-inch choke, showing 800 pounds tubing pressure and 1000 pounds casing pressure. It has gas sand at 2743-59 feet, shale 2759-68 feet, and oil sand 2768-75 feet, the total depth, casing being set at 2765 feet.

Navarro Oil Company's Seabury et

South Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
G. L. Kline, G. B. Lain 1, 150 ft nl and wl 100-ac tr, Stanfield sur..	*	290
BEE COUNTY—		
Houston Oil Co., Strauss 5, blk 10, sw sec 9 (W. Tuleta)	90	3965
Edwin M. Jones, Skinner Harris 8, e sw sec 10 (W. Tuleta)	250	3936
El Toro Oil Co., E. Gardner 1, F. Lewis sur (Caesar)	350	3028
Tuleta Oil Co., Skinner Harris 3, w nw sec 10 (W. Tuleta)	250	3932
United Prod. Co., G. A. Ray 48, W. J. Porter sur (N. Pettus)	*	3872
BROOKS COUNTY—		
Helmerich & Payne, Inc., Scott & Hopper 1, e sur 44, Palo Blanco gr	*	5040
DUVAL COUNTY—		
Birdwell Oil Co., Schoolfield 2, blk 13, sur 78 (Gov't Wells)	*	2700
Central Producers, Inc., Wendt 2-A (was 4) se sec 43 (Gov't Wells)	¶12-45	2275
Continental Oil Co., Clara Driscoll Sevier 4-A, sec 448 (Driscoll)	710	3430
Government Wells Oil Co., State Lundell 13, sec 60 (Gov't Wells)..	1440	2243
Magnolia, DCRC 2, sec 57, (Gov't Wells)	56	2220
C. W. Hahl 4-C, sec 61 (Gov't Wells)	50	2345
FRIO COUNTY—		
Amerada Pet. Corp. Halff & Oppenheimer 3, n 45 degrees, e 500 ft fr No. 2, J. H. Gilman sur (Pearsall), pb 3926	100	3931
HIDALGO COUNTY—		
Cortez Oil Co., C. E. Smith 3, tr 278, por 41 (Samfordyce)	750	2769
Gem Oil Co., Seabury et al 1, Tr. 256, por 38 (Samfordyce)	275	2776
Windsor Oil Co., Dr. J. M. Doss 2, tr 278, por 40 (Samfordyce)	550	2758
JIM HOGG COUNTY—		
J. M. Shugart, R. Holbein 1, 100 ft el, 330 ft sl, blk 55, sur 17, Las Animas gr	*	490
KARNES COUNTY—		
American Liberty Oil Co., I. Herder 1, 150 ft nel and sel 215-ac tr, James Johnson sur (Burnell) pb 3346	¶20	3495
Marr & Norton, M. E. Choate 3, 1000 ft se of n cor 228-ac tr No. 7 and on line of James Johnson & J. H. Clark sur (Burnell)	¶20	3330
LEE COUNTY—		
Humble, J. Simons 1, 2310 ft sw along nwl from n cor, thence se 330 ft at rt/a in 269-ac tr, R. H. Hunter sur	*	4728
LIVE OAK COUNTY—		
Houston Oil Co., Cartwright 30, Sandman sur (Lucas)	¶15-50	5266
Lion Oil Ref. Co., McNeill 3, Jane Curry sur (McNeill), pb and perf 4278-99	¶20	4450
McMULLEN COUNTY—		
American Gas Co., L. Jacob 1, 350 ft w of ne cor and 160 ft sel in 415-ac Frio Pasture, John Faddin sur (Jacob)	*	215
REFUGIO COUNTY—		
Atlantic & Stanolind, J. M. O'Brien 3-F, Ximinez sur (Greta) pb and perf csg 2186-96	¶20	6036
Standard Oil Co. of Kansas, Tom O'Connor 3, Crunk sur (Greta)..	225	4370
WEBB COUNTY—		
American Liberty Oil Co., A. M. Bruni 13, blk 45, sur 8, Arispe gr (Cole-Bruni townsite)	1000	3421
Magnolia, C. Benavides 5, ne se sur 661 (W. Cole)	*	3351
Peerless Oil & Gas Co. & Lamar G. Seeligson, A. M. Bruni Est. 1, sec 6, M. Arispe gr (Cole-Bruni townsite)	1600	3427
Sun Oil Co., A. M. Bruni 7, blk 10, sec 5, Arispe gr (Cole-Bruni townsite)	850	3420
WILLIAMSON COUNTY—		
Fritz Fuchs, H. F. Pfluger 1, 500 ft sl and el of J. Sapington sur	*	1044
G. L. Rowsey, Tr., Heap 6, H. White sur (Byersville)	*	1000

*Failures; †Junked; ¶Million cu. ft. gas.

al 3, Tract 256, Porcion 38, was completed as a gasser spraying oil in sidetracked hole at 2764 feet. The well was killed and a short string of five-inch casing was run to bottom and cemented. The casing will be perforated in effort to bring about oil flow.

Windsor Oil Company's Dr. J. M. Doss 2, Tract 278, Porcion 40, flowed eight barrels per hour through 1/16-inch choke, showing 200 pounds tubing pressure and 385 pounds casing pressure. It had oil sand at 2753-58 feet.

D. D. Oil Company has taken over W. L. Cleary's Brock & Showers wildcat 15 miles northwest of Mission, which is reported to have had a showing of oil in sand at 3048-56 feet. A drill stem test, however, netted only 10 feet of mud in 26 minutes. Cored two feet deeper, it showed nothing but shale. The well has been plugged back to 2980 feet, where whipstock is lost in the hole. It is now fishing.

Tomoconnor Well Is Being Finished

San Antonio, Texas.—Quintana Petroleum Company's Tom O'Connor 6-A, Tomoconnor field of Refugio County, is in process of completion after showing for a good producer on a drill stem test of the regular sand. It showed 24 fourbles of oil through 3/16-inch choke from sand at 5865-87 feet and casing has been set atop the sand. Derrick has been erected for Tom O'Connor 7-A.

Houston Oil Company also has a well in process of completion in a new area. F. B. Rooke 18, T. Mullin Survey, in the west side of the Refugio field, has drilled plugs after taking 3½ feet of sand to a total depth of 4925 feet. The well showed 450 feet of oil, 50 pounds pressure through 5/16- and ¼-inch chokes on a five minute drill stem test before casing was set.

Standard Oil Company of Kansas' Tom O'Connor 3, on the east side of the Greta field made 180 barrels per day through 3/16-inch choke from 4345-70 feet, showing a working pressure of 250 pounds and casing pressure of 1100 pounds.

Atlantic Producing Company & Stanolind Oil & Gas Company's O'Brien 3-F, deep prospect on the east side of the Greta field, failed to make a producer at 6036 feet and was plugged back to 2329 feet, where five-inch casing was set. Casing was perforated at 2186-96 feet and the well completed through tubing, showing 940 pounds working pressure on ¾- and ½-inch chokes.

Quintana Petroleum Company's Tom O'Connor 2-B, wildcat in the M. L. White Survey, is the second deepest test ever drilled in Refugio County, now coring below 8731 feet in the Vicksburg. The deepest well was drilled by Edwin M. Jones in the Refugio field, stopping at 9131 feet.

Bruni Townsite Is Extended Eastward

San Antonio, Texas.—Bruni townsite area of the Cole field, Webb County, continues to score large producers. In fact, it has become one of the most prolific producing areas in South Texas, although its present limits are limited to only about 500 acres, with 33 producing wells from the 3400-foot sand.

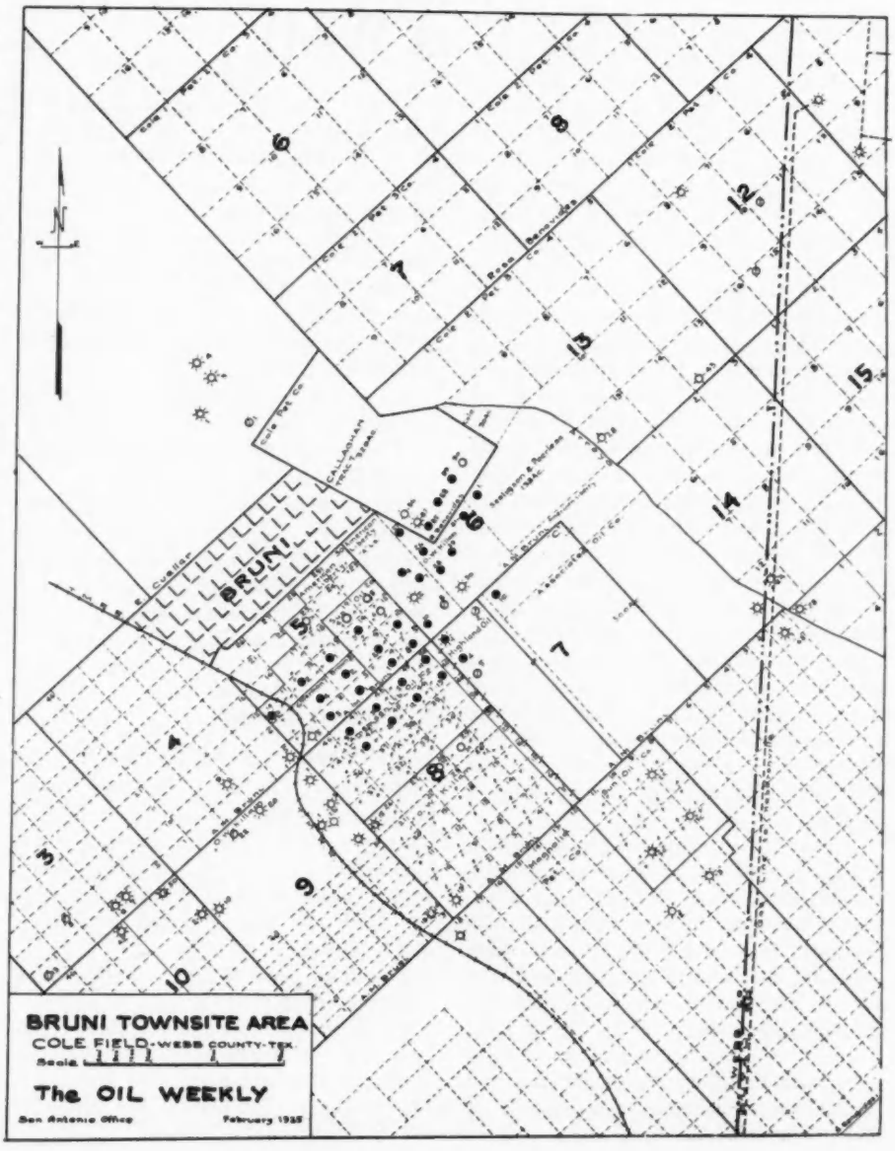
Peerless Oil & Gas Company and Lamar G. Seeligson's A. M. Bruni Estate 1, Section 6, Arispe Grant, most easterly well in the field, flowed 32 barrels of oil in 30 minutes through choke and is rated as one of the best wells in the field. It is bottomed at 3427 feet. It opens additional territory for development.

American Liberty Oil Company's A. M. Bruni Estate 1-C, Section 7, is being completed at 3405 feet, showing for a good producer. It has casing set at 3397 feet. It also is on the east side of the field and is south of the above producer. Same company's A. M. Bruni 13-A, Block 45, Section 2, flowed 35 barrels per hour through ¼-inch choke from sand at 3406-21 feet.

Sun Oil Company's A. M. Bruni 7, Block 10, Section 5, flowed 28 barrels an hour through ¼-inch choke. It had hard oil sand at 3403-15 feet, soft oil sand at 3415-26 feet and is bottomed at 3426 feet.

Cole Petroleum Company's Benavides 90, Callaghan Homestead tracts, most northeasterly well in the area, tested salt water at a total of 3419 feet and has plugged back to the 2300-foot gas level where it is waiting on cement.

O. W. Killam has three active operations in the field, American Liberty Oil



Company 2, Sun Oil Company 2, Peerless & Seeligson 1, Cole Petroleum Company 1 and Highland Oil Company 1.

Much of the oil is piped from the field by field line to Humble Pipe Line Company's Bruni tank farm, where it is put into Humble's trunk line to Inglesides, the pipe line company acting as common carrier for American Liberty organization. Part of oil is loaded into tank cars, via loading racks, and shipped in that manner. A large part of the production is for exportation purposes, some of which is for domestic use.

Gas Well Finished In McNeill Field

San Antonio, Texas.—Lion Oil Refining Company's McNeill 3, northeast of the discovery well of the McNeill field, Live Oak County, has been completed as a gasser spraying a small quantity of oil. It drilled to 4450 feet, set casing to total depth, plugged to 4308 feet and perforated casing at 4278-99 feet. The well is showing a pressure of 900 pounds on the tubing and 1200 pounds on the casing.

Lion Oil Refining Company's McNeill 4 has been located 335 feet due south of No. 1. All wells are in the Jane Curry Survey.

In the Lucas field, two miles southeast, Houston Oil Company has another high-pressure gasoline well. Cartwright 30, 1030 feet north of No. 26, is estimated at 15,000,000 cubic feet of gas and 50 barrels of distillate per day at 5266 feet. Casing is set at 5248 feet. The well is showing a working pressure of 1250 pounds and a closed in pressure of 1500 pounds.

Houston Oil Company has started up on Cartwright 31, located 1010 feet from No. 30.

Karnes County Field Is Extended by Gas Well

San Antonio, Texas.—Two more extensions were provided to the Burnell field, Karnes County, both wells produced gas. Two of the gassers, however, are making a spray of oil indicating that an oil field may be developed as the gas pressure is lessened.

Marr & Norton's M. E. Choate 3, nearly 1500 feet south of production, was completed as a large gasser at 3330 feet. It topped the sand at 3305 feet and was cored to the total depth where shale was encountered. The section was solid sand with the exception of a one-foot shale break. Casing was set at 3320 feet, in the sand, and upon completion the well rocked up a gas pressure of 1000 pounds in a short while through 3/16-inch choke. The top of the sand was encountered at minus depth of 2911 feet, highest point thus far logged on any of the wells.

American Liberty Oil Company's Ida Herder 1, northwest of production, topped the sand at a minus depth of 2925 feet and was completed for a large gasser with 1300 pounds pressure. Its actual top was 3340 feet with the well producing at a present depth of 3346 feet.

American Liberty Oil Company's Von Roeder 1, northeast of the discovery well, and Marr & Norton's M. E. Choate 1, discovery well, are showing a little oil with the gas. Gas from both wells is being used for fuel and the flow is so heavy that it is now necessary to run the gas through a separator before piping it to the boilers. Separators and tanks have been erected on the Von Roeder lease and the well is producing a small quantity of 44.5 gravity oil.

Herman Brown has made a location for a test southwest of the field. It is Edmonia Timberg, located approximately 330 feet from the northeast line and mid-way between the northwest and southeast lines of a 177-acre tract in the James Johnson Survey. Rig is being moved from the Ida Herder well and fuel will be supplied from the Von Roeder well. Pulling of gas for fuel for this well may bring about an increased oil flow.

Luling Oil & Gas Company is making preparations to drill a well in the northwest corner of the W. C. Boyce tract, south of the field.

This field does not have an outlet for gas at present, although pipe line facilities are close at hand. As a result, as fast as gassers are completed, they are capped, except for small amount of gas used for fuel for drilling wells.

Raccoon Bend Extended 1300 Feet

Houston.—The Raccoon Bend field of Austin County was extended approximately 1300 feet during the past week when Humble Oil & Refining Company's L. A. Machemehl 1-B, came in for 1400 barrels of oil per day from the Cockfield formation.

The well was drilled to 4147 feet and was completed through a quarter-inch choke. The well is located 1300 feet west of Payne 6, and is 992 feet from the southwest and 190 feet from the southeast line of 51-acre tract in the W. Smeathers Survey.

Kittrell Field Has Another Well

Houston.—Another producer was added to the Kittrell field of Houston County when Humble Oil & Refining Company completed Shaw 7, 660 feet southwest of Shaw 5, C. McEllis Survey, for 28 barrels of oil per hour. The hole was carried to 2031 feet and seven-inch casing was set at 1975 feet. The well came in flowing through a half-inch choke with 190 pounds pressure on the tubing and 525 pounds on the casing.

Production from Humble Oil & Refining Company's Shaw lease from February 13 to 20 inclusive, was around 2700 barrels. Shaw 1 is still dead, tubing pressure zero and casing pressure 30 pounds. Shaw 2 is flowing through half-inch choke on tubing with a pressure on tubing at 325 pounds; casing 500 pounds; Shaw 4 and 5 are pumping. All wells in the field are making an average of 375 barrels per day. Humble Oil & Refining Company shipped nine cars totaling 2100 barrels to the Baytown refinery, but in the future all oil produced from the Kittrell field will be shipped to Stanolind Oil & Refining Company at Whiting, Indiana. It is reported Humble Oil & Refining Company's drilling on the Shaw lease has been completed.

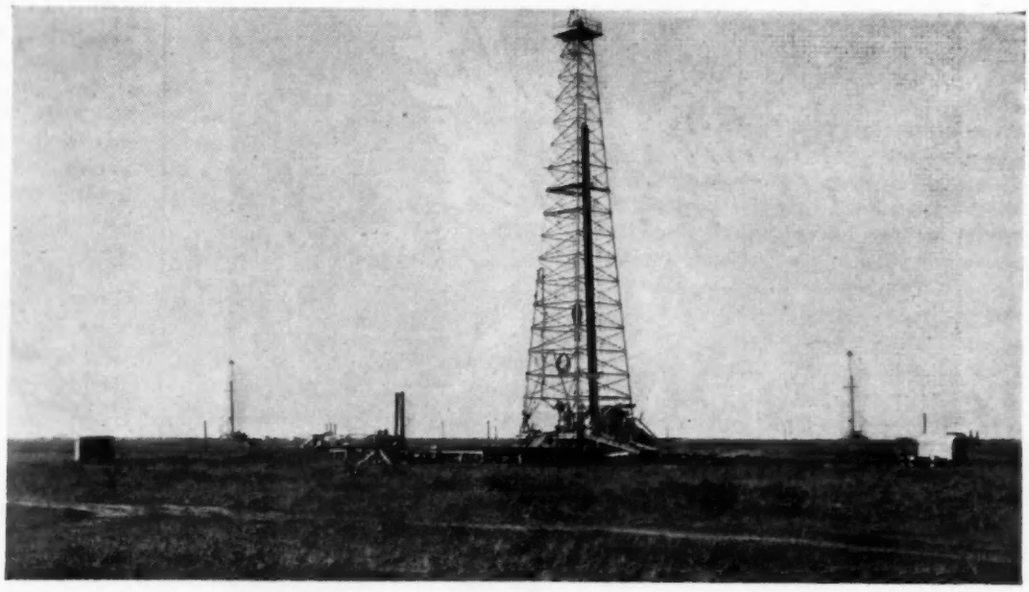
One and a quarter mile east of Lovelady, A. D. Adams & E. R. Mount's J. T. Sanders 1, J. J. Thomas Survey, was abandoned during the past week at 3045 feet. This well tested salt water in the Kittrell field producing horizon.

In Angelina County, Kock & Duffey's L. W. Alberry 1, near Diaboll, J. A. Brado Survey, was shut down at 2050 feet. It is reported that the operators had cored six feet of saturated oil sand at 2006 feet, however this has not been confirmed.

E. B. La Rue's W. D. Ivey 1, near Huntington, Scarborough Survey, Angelina County, was still shut down after its was reported the operators cored a good oil sand from 1460 to 1464 feet.

In Nacogdoches County, it is reported that an independent operator is assembling a block of 19,000 acres. He has been working four months on this block. The block is located north and west of the town of Nacogdoches. Three miles south of Nacogdoches, a test is to be drilled or started drilling by the first part of March on a 5000-acre block centering the La Cerda Survey.

DR. GAYLE SCOTT of Texas Christian University, Fort Worth, addressed the Shreveport Geological Society at their March meeting Friday night on the subject, "The Age of the Midway Group."



Three wells on the north flank at Manvel waiting on surface casing to set.

Active Campaign *Develops at Manvel Due to* Recent Discovery

CHARLES LEYENDECKER
Staff Representative

RECENT extension of Marginulina production on the north flank of the Manvel field, Brazoria County, has increased drilling operations and opened a large area for future development. Completion of Bowles & Borsodi's Norvel 1, north flank extension, proved that the field had not been defined in this direction. The new producer which came in for an initial production of 18 barrels per hour, resulted in an extensive leasing campaign and forced the immediate drilling of several offset locations.

On January 14, 1935, B. E. Norvel 1 came in for 18 barrels per hour after setting seven-inch casing on top of saturated oil sand found from 5617 to 5630 feet. The flow was through a quarter-inch choke with a tubing pressure of 700 pounds; casing 800 pounds. Since completion the well is allowed to make 172 barrels per day. The well now is on a 7/64-inch choke and is holding up its production.

Not only did this well extend the field 2000 feet north, but also opened up a new producing horizon on that side of the field. The deep pay before was found on the south and southeast side of the field. Nearest production to the extension test was found from the upper sands (Miocene). The extension test is located 247 feet from the south and 440 feet from the west line of a 70-acre tract in H. & T. C. R. R. Survey, Section 23, Lot 47.

The well was drilled on Pure Oil Company's 70-acre lease, which was farmed out to Borsodi, who in turn made a contract with Bowles Drilling Company to drill the test. Pure Oil Company retaining an overriding in royalty.

Upon completion of this extension test and discovery well for the deep pay on the north side of the field, the operators made location for B. E. Norvel 2 and 3. B. E. Norvel 3 was the second well put down by the operators with Norvell 2, waiting on the outcome of Norvell 3.

North Flank Promising

During the past week Bowles & Borsodi's Norvell 3 was waiting on cement to set at 5620 feet after seven-inch casing was set. The bottom of the hole being 5653 feet, where the operators drilled 33 feet of saturated sand. The operators did not drill through the entire section, having stopped in the deep pay. Top of the sand was found around 5620 feet. On a drill stem test from 5626 to 5353 feet the well showed 300 feet of oil in seven minutes through a quarter-inch choke on top and bottom with a working pressure of 50 pounds. The well showed no water.

If this well proves a commercial producer, which it has indicated it will, the field will be extended 500 feet further in the northward direction. Making the north flank of the field look promising for future exploratory work.

Upon comparison of B. E. Norvell 1 and Norvell 3, the two wells are running practically even, the latter being about seven feet lower than the former, however, this could be caused in measurement of the casing. The wells are spaced 500 feet apart. These two wells give indications that the field will be extended a good distance in this direction as it is not likely that the formation will dip suddenly because it is not that type of dome.

Drilling conditions on the north flank of the field are the same as that in the center of the field. Standard equipment is being used with 122-foot derricks. The average length of time for drilling and completing a well in the area is approximately one month.

Crude from the wells is in great demand, being 29 gravity and containing a high octane gasoline content.

Upon completion of Norvell 3, the operators will start Norvell 2, which is located approximately 500 feet east of the discovery well. If this well is completed as a producer the operators will be allowed to drill four more wells on their 70 acres, due to the spacing rule of the field, one well to 10 acres.

The Texas Company now is drilling on C. P. Dawson 1, center of Lot 59, H. & T. C. Survey, Section 23. The well is

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1000 feet southeast of the discovery well. The well is down to 4987 feet and running lower than Norvell 1 on the upper sands. The same operators have location for C. P. Dawson 2, 800 feet southeast of the extension test. The well is waiting on the outcome of C. P. Dawson 1. The Texas Company's L. G. Dawson 1 and 2 also are locations waiting on the outcome of the wells now being drilled. The Texas Company's Gulf Coast Loan Company 1, west offset to Bowles & Borsodi's Norvell 1, is drilling in shale at 4786 feet. This makes seven wells drilling, or to be drilled, on the north flank of the field.

If these wells prove commercial producers on the north flank of the field then it will allow several more independent operators to enter the Manvel field. To the north of the present activity The Texas Company is the major lease holder with several independents holding small spreads. To the east of the present production Sinclair Prairie Oil Company holds a large spread that looks productive.

Since the north extension test came in, Sterling Oil & Refining Company took a large block of acreage on the west and north side of the field after working the area with geophysical instruments. The company spudded W. A. Gamble 1, 375 feet from the west line and 250 feet from the north line of 10-acre tract in E. Little Survey, Block 78.

It is interesting to note that on the southeast flank of the field The Texas Company drilled Massey 1, to 7957 feet without picking up anything of commercial importance in the Marginulina formation, having topped the Discorbis at 5172 to 5174 feet, Heterostegina from 5469 to 5492 feet and Marginulina at 5590 feet. The well is located approximately one mile southeast of Norvell 1, which topped the Discorbis from 5162 to 5170 feet. On the southwest flank of the field and 3250 feet southwest of Norvell 1, Alpha Petroleum Company drilled Nochols 1, to 5827 feet before it was abandoned. This well topped the Discorbis at 5145 feet, Heterostegina 5363 feet and Marginulina at 5827 feet. Indicating a "high" between the two wells and making a "nose" protruding outward to the north.

Texas Coast Gets 12 New Oil Wells

Houston.—Completions along the Texas Gulf Coast total the same amount as reported the previous week. Of the 19 completions in the area, 12 resulted in producing wells with an initial production of 7361 barrels per day. The remaining seven completions were reported as failures.

Addicks Test Is Running High

Houston.—One of the most important wildcats on the Texas Gulf Coast at present is Cockburn Oil Company and Jack Frazier's Herman Hospital 1, east of Addicks, Wm. Hardin Survey, Harding County, which is reported to be running around 200 feet higher than the other well drilled in the area.

At the close of the week it was drilling in shale at 5817 feet, having topped the Discorbis at 3540 feet, Heterostegina at 3630 and Vicksburg at 5340 feet. The same operators' Mancuso well that was drilled in the same survey and 2800 feet southwest was abandoned at 6295 feet some time ago and topped the Hockleyensis at 6121 feet.

In Orange County, and located southwest of Orange, two independent operators have assembled a 6000-acre drilling block for a well to go 7000 feet. The well is to start by the middle of May, 1935. The operators are now offering spreads for sale.

Two Dickinson Wells Are Running Low

Houston.—Pure Oil Company's Schelor 1, 2800 feet north of the discovery well in the Dickinson field, B.B.B.&C. R.R. Survey, Galveston County, was recompleted during the past week after drilling 30 feet deeper to overcome a heavy gas pressure.

The well came in after washing for some time at the rate of 60 barrels per day of 51.4 gravity oil from 8037 feet. The flow was through a quarter-inch choke with tubing pressure of 1900 pounds; casing 200 pounds.

The well originally was completed at 8016 feet for approximately five barrels per hour. It was killed and on a core from 8022 to 8027 feet a sandy shale section with a good oil show was recovered. From 8027 to 8035 feet another good oil show was found. Casing was set and the well recompleted.

Humble Oil & Refining Company's E. Schafer 1, 3500 feet west and slightly south of the discovery well, W. K. Wilson Survey, was drilling at 8141 feet at the close of the week. As compared to the discovery well, it is running over 100 feet low. The well tested salt water at 8529 feet at the close of the week, are same operator's Danielson 1, 2500 feet southeast of the discovery well, J. Sellers Survey, which was drilling in shale at 8529 feet at the close of the week, are disappointing factors in the field. Both wells are drilling below the producing horizon and both are low wells compared with the discovery well. The same operator's W. J. Jones 1, 2000 feet west of Pure Oil Company's Schelor 1, J. S. Sherman Survey, was down 7955 feet and should reach the producing horizon this week.

One of the operators in the field is reported to have renewed leases on 158 acres for a reported consideration of $50 per acre.

Thompson Field Is More Active

Houston.—The Thompson field of Ft. Bend County has taken on new life since the completion of H. N. Naylor's Gehr 7, which extended the field and came in for 60 barrels per hour.

Gulf Production Company completed Hamerstrom 7, some time ago to prove this area and has made location for W. D. Myers 1, 2777 feet west, 340 feet north of the southeast corner of 202-acre tract and survey in the H. Chrisman Survey. This well is a northeast extension test.

In the area of Rosenberg, it is reported that an independent operator had approximately 9000 acres centering the H. Scott Survey and has turned this acreage to one of the major oil companies. The major company has a geophysical crew working in the area at present.

Texas Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BIG CREEK—		
Gulf Stream Oil Co., Ahler 2-A	*	2576
G. H. McCarthy, W. C. Moore 1 ...	12	3668
BOLING—		
Allied Minerals Corp., J. H. Blackwell 1	*	5280
CONROE—		
Strake Pet. Corp., Krohn 6 1056		5556
DICKINSON—		
Pure Oil Co., Schelor 1 (wo)	60	8037
EUREKA—		
Means & McGhee, Laura Lackner 1..	*	7852
H. E. Neuhaus 1	*	7701
HANKAMER—		
Gulf Prod. Co., Crow & Jacobs 4....1200		4290
KITTRELL—		
Humble O&R Co., Shaw 7	672	2031
MYKAWA—		
West Prod. Co., J. Ryemon et al 1..	960	4524
RACCOON BEND—		
Humble O&R Co., L. A. Machemehl B-1 1400		4147
SPINDLE TOP—		
Yount-Lee Oil Co., McFaddin 71 (wo)	200	4050
TOMBALL—		
Humble O&R Co., E. Ford 1	563	5561
M. Milo 1 (wo)	322	5560
M. A. Quilter B-7	556	5553
The Texas Co., R. W. Hirsch 3	360	5587
BRAZORIA COUNTY—		
Luling O&G Co., M. J. Jamison Est. 1, 150 ft fr n and 2100 ft fr e line of 790-ac tr in C. Smith sur	*	4535
GRIMES COUNTY—		
Holt & Freund, M. O'Brien 1, 1200 ft n of s line, 400 ft w of e line of 20-ac tr in M. Evans sur	*	3080
HOUSTON COUNTY—		
A. D. Adams & E. R. Mount, J. R. Sanders 1, 330 ft fr s and w lines of 55-ac tr in J. J. Thomas sur....	*	3040

*Failures; †Junked; ¶Million cu. ft. gas.

Hasting Discovery Recompleted Again

Houston.—Stanolind Oil & Gas Company's J. W. Surface 1, the discovery well for the Hasting field, Brazoria County, was being recompleted at the close of the week. At noon March 1, 1935, the well was flowing mud, washwater and oil. Fifty percent being oil and the balance mud and washwater. The hole was swabbed and the well came in slowly for an ungauged volume of fluid. The flow was through a three sixteenth-inch choke with 475 pounds on the tubing and no pressure on the casing.

The same operators W. J. Miller 1, 2250 feet east of the discovery well, A. C. H. & B. Survey, was drilling in shale below 5848 feet at the end of the week and should reach the producing sand during this week. The operators topped a gas sand at 5824 feet and drilled through this sand to 5848 feet. This well is running higher than the discovery well on the geological markers.

Steve Paul 1, 2000 feet south of the discovery well, same survey as mentioned above, was waiting on cement to set at 4395 feet, having set nine and five eighths inch casing at 4353 feet. W. B. Wooster 1, 2600 feet north of the discovery well, was drilling in shale at 2041 feet at the end of the week.

Anahuac Well Is Ready for Completion

Houston.—Humble Oil & Refining Company's A. Middleton 1, six miles east of Anahuac, Chambers County, H. & T. C. Survey, section 58, was preparing to bring the well in late Friday, March 1, 1935.

The well was delayed from being completed during the past week due to several fishing jobs. The plugs were drilled and was ready for completion at the close of the week.

If this well proves a commercial producer it will add another field to Chambers County and to the Gulf Coast.

Two Failures in New Eureka Pool

Houston. — The first two failures were reported in the new Eureka field of Harris County during the past week when Means & McGhee abandoned Laura Lackner 1 and H. E. Neuhaus 1 simultaneously.

Laura Lackner 1, 3500 feet northwest of the discovery well, H. Rienerman Survey, was drilled to 7852 feet before the operators decided to plug and abandoned. The well drilled 167

feet into the Upper Saline Bayou, having topped that formation at 7585 feet. The well failed to find anything in the Cockfield formation from which the discovery well is producing.

H. E. Neuhaus 1, quarter mile northwest of the discovery well, Wm. P. Morton Survey, also was finaled in the Upper Saline Bayou at 7701 feet, without taking a core. This test topped the formation at 7630 feet.

Both of the wells drilled through the Cockfield formation and into the Upper Saline Bayou before plugging. H. E. Neuhaus 1, was abandoned after Laura Lackner 1, was finaled.

Eureka Oil Company has made location for Varner Realty Company 1, 400 feet north of the south line of 107 acre tract and 4175 feet west of the east line of J. Reinerman survey. The well is located southeast of the discovery well.

Wharton County

Houston.—John Deering's Kountz 1, southeast of Louise, S. A. & M. G. RR. Survey, Wharton County, was drilling at 4767 feet at the end of the week after coring salt water sand from 4757 to 4767 feet.

Tomball Field Extended Southeast

Houston.—The Tomball field of Harris County was extended over 1000 feet southeast upon the completion of Humble Oil & Refining Company's E. Ford 1, for 563 barrels of crude oil per day during the past week.

The bottom of the hole is 5561 feet and six-inch casing was set at 5542 feet. Top of the oil sand was found at 5539 feet. The oil flowed through a quarter-inch choke with 850 pounds on the tubing and 1278 pounds on the casing.

The well is located southeast of Humble Oil & Refining Company's Gossett 1, which extended the field some time ago. Upon comparison of the two wells they are running about normal, with the E. Ford slightly lower than the Gossett well. The well is 363 feet from the southeast and 466 feet from the northeast line of 40-acre tract in the E. Smith Survey.

Brazoria County

Houston.—Four miles west of Angleton, Brazoria County, Luling Oil & Gas Company's M. J. Jamison 1, 150 feet from the north line and 2100 feet from the east line of 790-acre tract in the C. Smith Survey, was abandoned during the past week at 4535 feet.

North of Angleton around the town of Anchor, it is reported that one of the major oil companies is taking a block. To date the concern has approximately 5000 acres. The reported consideration for the acreage is from two to 10 dollars per acre. The area has been worked by several of the major oil companies with geophysical instruments.

Also in the same area an independent royalty company has a 5000-acre block and has assigned half to an oil company to work with geophysical instruments.

Jefferson Parish

Lake Charles, La.—The Texas Company's Bayou St. Denis 1, six miles southeast of Lafitte, Section 19-17s-24e, Jefferson Parish, was drilling below 6431 feet at the end of the week after coring another sand showing oil from 5647 to 5651 feet. On a core from 5783 to 5788 feet the well had another good showing of oil. Top of the sand was found at 5783 feet.

As reported the previous week the well had 10 feet of saturated oil sand and started to make a production test but decided to take another core. The core from 5137 to 5147 feet showed salt water. The hole then was carried to the present depth where the operators are expecting production from the Oligocene formation.

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HOUSTON, TEXAS

Gillis Field Gets Disappointment

Lake Charles, La.—Union Sulphur Company's Buhler 1, Gillis field, Section 11-9s-8w, Calcasieu Parish, looked disappointing during the past week when it drilled into a water sand from 6721 to 6731 feet. At the close of the week the well was down to 6828 feet without having any shows and missing the producing horizon for the field. The well is located 1000 feet southwest of the discovery well.

The same operator's State 2, 750 feet southeast of the discovery well, Section 12-9s-8w, was completed and came in at 10 A. M. February 27, 1935, making 18 barrels of pipe line oil per hour through a quarter-inch choke. The oil showed one percent wash water. Tubing pressure registered 1075 pounds. Six and five eighths-inch casing was set at 6701 feet where the oil sand was topped.

The Texas Company's Nickerson Fee 1, 220 feet west of Union Sulphur Company State 1, and 50 feet from the bank of the river, section 12-9s-8w, was waiting on cement to set at the close of the week at 6709 feet having set nine and five eighths-inch casing at that depth. Top of the oil sand was found at 6713 feet. When, and if this well is completed as a commercial producer it will add a third operator in the Gillis field.

Bosco Field

Lake Charles, La.—Oswege Oil Compnay's Mouton 1, on the south flank of the Bosco field of Acadia and St. Landry Parishes, was waiting on cement to set at the close of the week after setting seven-inch casing at 8577 feet. Bottom of the hole is 8607 feet. This well topped an oil sand at 8582 feet.

This well crossed a fault in the field and is running 90 feet lower than the other wells drilled in the area. With the completion of this well it will add a new operator to the Bosco field which heretofore operated solely by Superior Oil Producing Company.

Louisiana Coast Map

A new map is now available covering Calcasieu, Jefferson Davis and Acadia Parish, in the Louisiana Gulf Coast, showing proven fields, all drilling wildcats and dry holes. The map is drawn on scale one-inch to 4000 feet, size 3½ x 11 feet. The map was compiled by Gulf Coast Engineering Company, Houston, Texas.

Five Louisiana Coast Completions

Lake Charles, La.—There were only five completions reported in the Louisiana Gulf Coast during the past week and of that amount just two resulted in oil producers and one of these being a workover. The initial yield from the two producers was 1246 barrels per day. The remaining three wells were abandoned.

At the close of the week there were 571 producing wells in the South Louisiana Coastal area which yielded 94,130 barrels of crude oil daily. The 571 producing wells were scattered through 29 oil fields. Of the 29 fields, Iowa, Jefferson Davis Parish; Bosco, Acadia and St. Landry parishes; and Leesville in La Fourche Parish are the three largest fields in the area. Iowa has 53 producing wells averaging 18,618 barrels per day, Bosco's 28 producers yield 16,089 barrels daily and Leesville has 64 oil wells having a daily output of 15,881 barrels every 24 hours. The Four Isle field of Terrebonne Parish, has only one producing well, which is the discovery well, and it has a daily output of 750 barrels. The rest of the fields average from two to 51 producing wells.

A survey of the geophysical work in the area shows 36 geophysical crews shooting the territory. No one area is considered the center of activity but it is general throughout the Coast region. Each parish has its share of crews.

Bienville Parish

Shreveport, La.—N. V. Duncan and associates (Century Oil and Drilling Corporation) of Shreveport, who recently completed a wildcat test on their 10,000-acre block in Bienville Parish, in Section 4-18n-7w as a dry hole at 3350 feet, are drilling a series of core tests on the block preparatory to drilling another test to about the same depth. The core holes, four of which have been drilled, are being sunk to the Cane River at a depth of about 400 feet.

The same operators' J. M. Norton 1, SW NE Section 27-11n-14w, DeSoto Parish, which had a gas blowout at 2825 feet in Tokio, and set casing at 2810 feet, tested an estimated four million feet of gas and considerable salt water when drilled in. Operators have not decided on their future course relative to the test.

14 Drilling Permits In North Louisiana

Shreveport, La.—Fourteen drilling permits were issued last week by the minerals division, Louisiana Conservation Commission. All were South Louisiana parishes. The permits were divided among the following parishes: Acadia Parish, four; Ascension, one; Calcasieu, three; Iberia, two; Iberville, one; La Fourche, two, and St. Landry, one.

Naborton Field

Shreveport, La.—Bailey Gaunce Oil Company's Jenkins 2, Section 35-13n-12w, DeSoto Parish, Naborton field, last week showed an estimated ten million cubic feet of gas in a drill stem test, run after hole was bottomed at 3628 feet. This test is a 900-foot offset to the same company's Jenkins 1 in the same section that was the first and only lower Cretaceous gasser ever completed in that field which produces oil from the Tokio at 2700-2800 feet.

Third 2800-Foot Gas Well At Sligo

Shreveport, La. — The third gas producer from the probable contact of upper and lower Cretaceous in the Sligo gas field, which has gas producing horizons at 900 feet, 1900 feet, 2400 feet, 2800 feet, 3200 feet and 4200 feet, was completed last week 1½ miles east of the nearest gasser in the 2800-foot horizon when Arkansas-Louisiana Gas Company completed a 41 million foot gasser with 1250 pounds rock pressure at 2799 feet.

The new Sligo gasser was one of four completions last week in North Louisiana, only one of which, a 25-barrel pumper in the Bellevue shallow field, Bossier Parish,

Louisiana Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BLACK BAYOU—		
Shell Pet. Corp., State Land 2 (wo)	526	4311
BOSCO—		
Superior Oil Prod. Co., P. O. Hernandez 4	720	8683
LEESVILLE—		
Lincoln Oil Co., State Lease 5....	*	lcn.
LOCKPORT—		
Magnolia Pet. Co., Bordages 12 (wo)	*	7800
SULPHUR—		
Union Sulphur Co., Hunter 3.....	*	3449

*Failures; †Junked; ¶Million cu. ft. gas.

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSSIER PARISH (Bellevue)—		
O. F. Shaver, Tr., J. W. Elston 5, se se 10-19n-11w	25	485
BOSSIER PARISH (Sligo)—		
Arkansas-Louisiana Gas Co., R. O. Roy 1, nw sw 18-17n-11w	¶41	2799
SABINE PARISH (Oak Ridge)—		
Frank R. Foster, Inc., N. Phillips 1, sw sw nw 16-9n-11w	*	3540
UNION PARISH (Monroe)—		
Inter-state Nat. Gas Co., Spencer 6, sw se 2-20n-3e	¶1½	2154

*Failures; †Junked; ¶Million cu. ft. gas.

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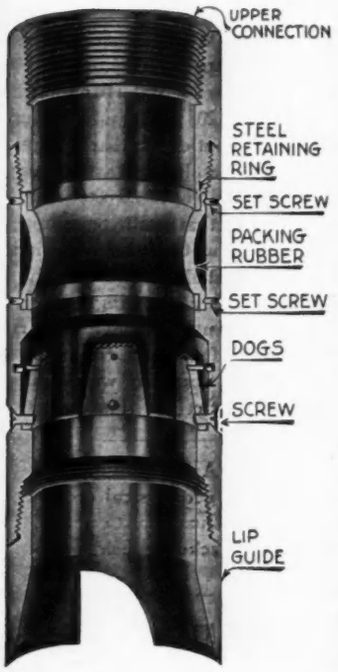

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was an oil well. The Monroe gas field added one small gasser and a wildcat in Sabine Parish completed the list of completions.

North Louisiana had only one new location, Southern Carbon Company's Fee 66, NW NW 5-20n-4e, Union Parish, Monroe gas field.

Urbana Gets Pipe Line Outlet

El Dorado, Ark.—Although Standard Pipe Line Company of Louisiana withdrew as a purchaser of Urbana, Arkansas, crude February 20, production in that field will have an outlet. Urbana Pipe Line Company (Alexander and associates) plan to produce and buy 20,000 barrels of Urbana crude that will be shipped by tank car to New Orleans and thence by tidewater to Philadelphia, Pennsylvania.

Ouachita Valley Refining Company at El Dorado recently made a test run of 10,000 barrels of Urbana crude for Mexican Petroleum Company which may provide another outlet for this crude.

El Dorado, Ark.—Phillips Petroleum Company has a geophysical crew working in Union and Ouachita Counties, northeast of the Smackover field.

All Arkansas Completions Dry

El Dorado, Ark.—Arkansas failed to record a producer last week, all three completions in that state being dry holes. Two of the abandonments were in Garland City, Miller County, and the other was in Rainbow City, Union County. One of the abandonments in Garland City was an east edge test offsetting a recent producer.

Two miles southeast of the lone producer in the shallow Camden field, Ouachita County, Kraft Oil Corporation showed water when plug was drilled in 6⅝-inch casing cemented at 1420 feet with hole bottomed at 1428 feet, in Rath & Cartier 1, NW SW SW 32-13-17.

In the same area, T. J. Gaughan and associates are rigging for J. Humphrey 1, SWc NE NE 30-13-17, and J. B. Street, Trustee, has abandoned location for J. M. Ashworth 1, SWc NW NW 19-13-17, the former location being drilled instead of the latter.

Charles H. Murphy and Joe Hurley of El Dorado, who recently abandoned a test in Section 29-18-11, Union County, have assembled a block of 6000 acres centering in Section 12-19-12, the block having a northwest-southeast trend, and will drill a 4000-foot test. The block is roughly two to three miles wide and six miles long. One dollar was paid per acre.

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MILLER COUNTY (Garland City)—		
Magnolia Pet. Co.'s E. V. Olivet 7, ne nw 3-16-26	*	2947
Jno. Wrather, H. E. Beck 2, se sw se 34-15-26	*	2981
UNION COUNTY (Rainbow City)—		
C. E. Murdock, Inc., J. M. Gregory 9, sw ne se 10-17-14	*	3453

*Failures; †Junked; ¶Million cu. ft. gas.

Four New Permits Issued in Arkansas

El Dorado, Ark.—Four drilling permits were issued last week by the Arkansas Board of Conservation. The list of the permits follows:

La Fayette County—Riggs Brothers, Dubose 1, 300 feet from SEc SW NW 35-15-24.

Ouachita County—T. J. Gaughan, Bragg 2, center NE NW SE 25-13-18.

Union County—Joe Modisett, J. M. Gibson 1, center SE SE SE 6-18-13; L.

Union County—Joe Modisett, J. M. Hill 1, center SE SE NW 6-18-13.

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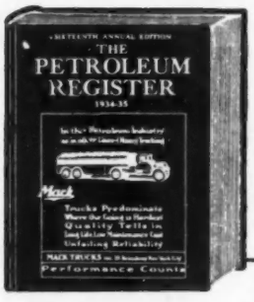

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Mississippi Blocks Are To Be Tested

Jackson, Miss.—F. E. Stewart is expected to spud a 5000-foot test on a 6500-acre block of leases he holds in Madison County, Mississippi, near the town of Flora before April 15. Stewart is reported to have obtained a $2000 commitment from Sun Oil Company payable if and when he reaches that depth. Sun Company and Magnolia Petroleum Company have considerable acreage in that vicinity.

E. B. Germany of Dallas, Texas, is reported to have taken a seven-eighths mineral perpetual title to 9000 acres of land owned in township 4 north, range 16 west, Lamar County, south Mississippi, in the vicinity of the block on which he has been curing title after drilling a 3500-foot test several months ago. Rumors are that when Germany starts another test on tese blocks it will be a 7500-foot test.

M. M. Stokes of Natchez, Mississippi, is assembling a block in Adams County, in township 8 north, two west. T. H. Robinson of Jackson is leasing in Hinds County near the town of Edwards.

Humble Oil & Refining Company is reported to have leased 60,000 acres in Marion County, on both sides of Pearl River. This block is north of the Gulf Coastal area and is either a play for "the trend" or as a result of some new geophysical discovery, it is believed.

Pure Oil Company is not renewing its five-year leases on a 5500-acre block in Clarke County, east central Mississippi, on which this company in 1927 drilled a test in Section 30-2n-14e, to 2290 feet.

Dry Holes in Alabama And Mississippi

Jackson, Miss.—Mississippi had one abandonment and one new location last week, both by Gulf Refining Company in the southern part of the state. One test was abandoned in Alabama.

Gulf Refining Company abandoned a test in Forrest County at 3025 feet but left surface casing in the hole, a policy followed in a number of the more than 20 wildcat tests drilled for structural information by this company on its vast holdings in south Mississippi.

Gulf's new location is Dantzler Lumber Company 7, Section 36-3s-11w, Stone County, the location being within a half mile of 5000 acres leased last week by this company from the trustees of the University of Mississippi. The present test will complete the drilling obligation with Dantzler Lumber Company, much of whose cut over lands are held by Gulf.

The Alabama test abandoned was in Conecuh County and was drilled by Ray L. Estabrook to 4831 feet, where it was abandoned as dry. This test had a gas show at 986 feet but fresh water showed when a test was made. Eutaw was logged in this test at 3100 feet and red beds at 4600 feet; elevation was 180 feet. Joe Modisett of El Dorado, Arkansas, who drilled the well under contract will move his rig to another location in Jackson County, Florida, in which Estabrook is said to be interested.

Southeastern States Completions

MISSISSIPPI

Company, Well and Location	Init. Prod. Bbls.	Depth
FORREST COUNTY—		
Gulf Ref. Co., Batson-Hatton Lbr. Co. 1, se se 11-1n-13w	*	3025

ALABAMA

CONECUH COUNTY—		
Ray L. Estabrook, Miller Lbr. Co. 1, w½w½ ne 1-4n-12e	*	4831

*Failures; †Junked; ¶Million cu. ft. gas.

More Florida and Alabama Activity

Mobile, Ala.—Indications of more development at an early date in southern Alabama and Florida are seen in leasing activity reported last week.

In the southern part of Lake County, Florida, where Oil Development Company of Florida last week spudded a test, Carl White, George Bertz, Wendle Stone and Charles Freck of Uniontown, Pennsylvania, have obtained a block and plan to start a test within a few weeks.

In Washington County, southwest Alabama, Arkansas Fuel Oil Company (Cities Service) which has a large block of holdings in that county near Chatom, are drilling a series of core drilled holes which are going to 375 feet and are following in the wake of seismograph work recently completed on the block. Arkansas Fuel Oil Company has 50,000 acres or more in its block, some of which is under geophysical option. The acreage is located in townships 5, 6, 7 and 8 north, ranges 1, 2 and 3 west and range 1 east.

Benedict and Associates of New York have completed two blocks in south Alabama, for early tests. One is in Butler County near Georgiana, and the other is in Dale County. Contract for the two tests is reported to have been let to Joe Modisett of El Dorado, Arkansas.

More than 2000 acres has been leased recently in Covington County by Sun Oil Company, which also took acreage around a test drilled recently in Conecuh County.

Cut Bank Production Held to Demand

Cut Bank, Mont.—Operators in the Cut Bank field are voluntarily restricting production to about 60 percent of capacity as the northern Montana oil market is faced with an over-supply of crude. This co-operation on part of Cut Bank producers is credited with holding Cut Bank price of crude at $1.35 per barrel. Meantime, little new work has started in the field and there are at present 14 tests underway, as operators are awaiting a revival of Canadian refining activity to start any field developments.

Watson et al's Miller 1, NW NE Section 1-33N-6W, was a failure, and is plugging and abandoning. The test drilled to 2972 feet in the Ellis and found the Sunburst at 2835-40 feet dry, and the Cut Bank sand at 2875-84 feet dry.

R. C. Jeffires abandoned location for Hope 1, Lot 10, Section 12-33N-6W.

Wickstrand & Walgren's Simero 1, Lot 5, Section 12-33N-6W, a town test, is nearing completion, drilling at 2953 feet with an oil show at 2838 feet. Another town well near completion is Marshall et al's Wilkins 1, SE NE 12-33N-6W, which is drilling out plug with the 6⅝-inch casing set at 2950 feet.

Fist et al's Daen 1, Lot 10, 12-33N-6W, is drilling at 2750 feet. Askins' Fee 1, Lot 24, Section 12-33N-6W, is spudding at 100 feet. Hannah-Porter Oil Company's International Harvester Company 1, Lot 7, Section 12-33N-6W, is rigging up.

A. B. Cobb's Walburger 4, SE SE 33-35N-6W, which was non-commercial at 2792 feet, has drilled deeper to 2840 feet, and swabbed 50 barrels initial. Operator is installing pumping equipment.

Gardner-Smith Syndicate's Tweedy 1, NE NE 36-33N-6W, a southwestern extension test to the field, is spudding.

Lovell, Wyo.—Crosby & Huntington's Denio 1, Tract 43, Section 15-55N-97W, in the Byron district, Big Horn County, has resumed operations and is running 10-inch casing to 3000 feet. Garland Oil Company's Government 2, SE NE NW 14-56N-98W, in the Garland field, is drilling at 1850 feet with 8⅝-inch casing set at 1783 feet.

Cody, Wyo.—Rocky Mountain Gas Company's Oregon Basin Oil & Gas Company 1, SW NW 35-51N-100W, in the Oregon Basin field, Park County, northern Wyoming, is drilling at 221 feet.

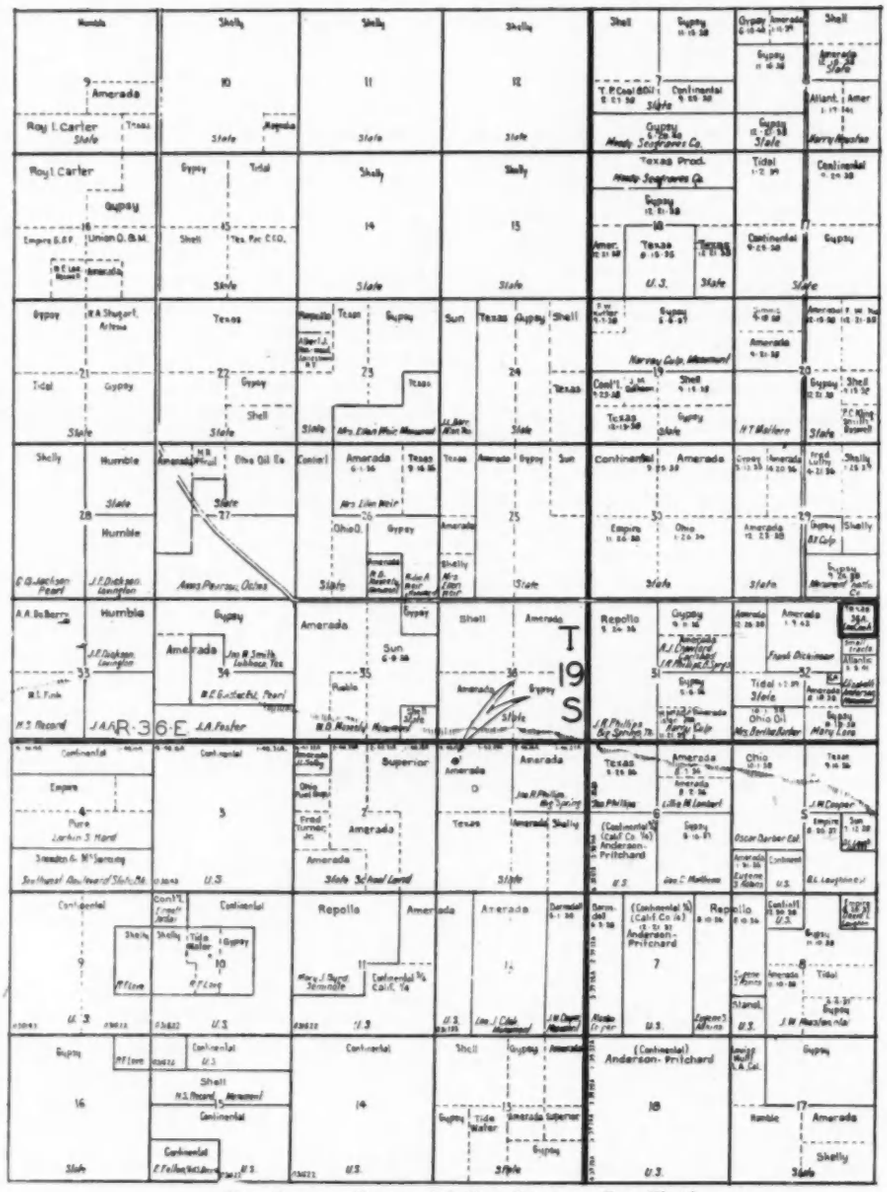
Mountain Area Discovery Well Flows 900 Barrels On Gas-Lift

Hobbs, New Mexico.—Rated at 900 barrels daily on gas lift, Amerada Petroleum Corporation's State 1-D, C NW NW 1-20s-36e, discovery well of the Monument area, was shut in the past week pending the erection of six 1000-barrel storage tanks. It is listed as a temporary completion in lime at 3929 feet, or 339 feet below sea level, as it is isolated from pipe line outlet. The well was reported last week showing for a small oil producer at 3895 feet, and in deepening logged production gains from saturated dolomite at 3903-06 and 3912-20 feet, but lacked sufficient gas with the oil to sustain a steady flow. High-pressure gas from the upper section of the lime had been bradenheaded, and was utilized in flowing the well for its initial gauge. The oil tests 32 gravity at 53 degrees temperature, and compares in quality and sulphur content with the Eunice field, nearest oil production, although the lime pay zone has been tentatively identified as being of about the same age as the oil horizon in the Hobbs field.

Further development for the Monument area, which was explored on the strength of geophysical surveys conducted nearly five years previous to the drilling of the first test, already is assured. Superior Oil Company (California), owner of west offset acreage, is reported to be planning an early test, while the discovery company will likely offset its producer on the north. The location previously reported as having been made about 1½ miles to the southeast by the Anderson-Prichard Oil Corporation, Oklahoma City, now has some material on the ground. The latter concern was assigned 1220 acres out of a Federal permit held jointly by Continental Oil Company and The California Company. Location is at C NE NW 7-20s-37e, and on the Brett permit.

The Cooper field scored an eventful week with important extensions, and four completions. Phillips Petroleum Company and Pure Oil Company's Wool 1, C NE NE 3-25s-36e, situated about three-quarters of a mile southwest of nearest production, provided a big surprise in flowing at rate of 150 barrels of pipe line oil per hour and 2,000,000 cubic feet of gas daily on drill stem test from lime at 3497 feet, or 235 feet below sea level. Oil saturated lime was cored at 3486-3493 feet. The hole has since been cased with seven-inch pipe at 3478 feet, preparatory to completion. This outpost was considered a doubtful location as the top of the brown lime, a fairly reliable marker, was logged at 3214 feet, or 48 feet above sea level, being from 200 to 500 feet lower than other nearby producers. Offsets will be required of Gypsy Oil Company, The Texas Company and Empire Gas & Fuel Company.

Two flowing wells on the east border of the center portion of the Cooper field were scored by Phillips Petroleum Company and Pure Oil Company, and locations made for west offsets to each. Woolworth 11, C SE NW 26-24s-36e, proved to be a small well in flowing 48 barrels hourly through open 2½-inch tubing from lime at 3498 feet, or 175 feet below sea level. Top of brown lime was logged at 538 feet above sea level. Woolworth 12-A, a south offset, flowed at rate of 100 barrels hourly and 1,500,000 cubic feet of gas daily on drill stem test at 3457-90 feet, or 173 feet below sea level. Completion is to follow the cementing of seven-inch pipe at 3461 feet. Amerada Petroleum Corporation's Nugent Everett 2, C SE SW 26-24s-36e and a south offset to Woolworth 12-A, was completed in saturated lime at 3426-32 feet, with a total depth of 3438 feet, or 133 feet sub sea,



Map Courtesy Zingery Oil Map Company, Fort Worth

Lease ownership in general vicinity of Amerada Petroleum Corporation's wildcat oil producer on the Monument structure, Lea County, New Mexico, as illustrated by the above map, is already in the hands of the large companies. This detracts from the commotion such a discovery creates in oil circles, but a sizeable drilling program is to follow nevertheless. Arrow indicates the location of the producer.

flowing 345 barrels of oil in three hours through 1½-inch choke on 2½-inch tubing. These three new producers will require east offsets by a like number of companies, who have been reluctant to drill for fear of making big dry gas wells due to the saturated lime pinching out abruptly on this east flank of the reef type of structure.

North End

Trio of oil wells brought in by Continental Oil Company and The California Company the past week added a new row of producers to the north end of the Cooper field, which is proved for an average width of about one mile and for a length of 3½ miles, with the north and south trends wide open for important extensions. The above partnership's D. L. Vaughn 1-A-14, C SW SW 14-24s-36e, gauged 60 barrels hourly through three-quarter-inch choke on 2½-inch tubing from lime at 3491-3521 feet, or 175 feet sub sea. The gas volume was rated at 1,200,000 cubic feet daily. Vaughn 2-A-14, an east offset, also gauged 60 barrels hourly through similar choke, with gas flow placed at 3,660,000 cubic feet daily. Production was from saturated lime at 3500-15 feet, or 177 feet below sea level. This producer is a west offset to Humble Oil & Refining Company's Cooper 3, which missed the oil horizon in drilling to 4194 feet, but made a big gasser in plugging back to 3494 feet. Vaughn 1-A-15, C SE SE 15-24s-36e, was completed at 3520 feet, or 166 feet sub sea, flowing five barrels oil per hour and 4,190,000 cubic feet daily, but has since been killed to deepen.

Three completions in the Eunice field the past week were on offset locations. Gypsy Oil Company's A. F. Houston 1, C SE SE 7-21s-36e, flowed 206 barrels of oil in six hours through open tubing from lime at 3896-3917 feet. Flow of gas was estimated at 4,500,000 cubic feet daily. Continental Oil Company and The California Company's A. E. Meyer 1-A-18, a south offset, gauged 35 barrels hourly through three-quarter-inch choke at 3914 feet, or minus 276 feet, while their Meyer 2-A-18, C SW SW 18-21s-36e, flowed 50 barrels hourly and estimated daily yield of 1,700,000 cubic feet of gas through three-quarter-inch choke from lime at 3885 feet, or 273 feet below sea level.

Roosevelt County

Hobbs, New Mexico.—Reported show of free oil from the Glorietta sand zone by the Claudell Development Company's Wilmes 1, SW SE 21-2s-30e, western Roosevelt County, is to be tested. The sand was logged at 3626-3628 feet, and casing is scheduled to be set on lime above the oil show.

Rawlins, Wyo.—Schupach, Dame, et al are moving in material for Hughes 2, NE NE 25-26N-98W, on the Mahoney Dome structure, Carbon County, central Wyoming.

Great Falls, Mont.—Ohio Oil Company this week sold its holdings in the Pondera oil field, Pondera County, Montana, to Arthur Hoeh, an independent operator in the Kevin-Sunburst field. The property consisted of a lease of 160 acres, in the SE SE 15, N½ NW and NW NE 22-27N-4W, with 11 producing wells and five undrilled locations. The seller will purchase crude from the lease under a one year contract. The production averages around 1700 barrels a month. Sale price for the property was not disclosed.

Thermopolis, Wyo.—The California Exploration Company has contracted to sell 100,000 barrels of black oil from its recent wildcat oil well completion on Waugh Dome, Hot Springs County, to the Fern Oil Company for its refinery here. The Waugh Dome well is producing 450 barrels daily.

Craig, Colo.—Stanolind Oil & Gas Company this week released location for Parkinson 28-X, NE SW SW 22-4N-92W, in the Iles Dome field, Moffat County, northwestern Colorado. The test, headed for the Sundance, will spud on completion of company's Parkinson 35, SE NE NE 22-4N-92W, which is drilling at 3050 feet, close to the objective.

Mountain States Completions

NEW MEXICO

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Wildcat)—		
Amerada Pet. Corp., State 1-D, c nw nw 1-20s-36e	900	3929
LEA COUNTY (Cooper Field)—		
Amerada Pet. Corp., N. Everett 2, c se sw 26-24s-36e	¶3-10,000	3438
Continental Oil Co.-California Co., D. L. Vaughan 1-A-14, c sw sw 14-24s-36e	¶3-3000	3521
D. L. Vaughan 2-A-14, c se sw 14-24s-36e	¶5-3500	3515
Phillips Pet. Co.-Pure Oil Co., Woolworth 11, c se nw 26-24s-36e. .	¶1-1200	3498
LEA COUNTY (Eunice Field)—		
Continental-California Co., A. E. Meyer 3-A-8, c sw sw 8-21s-36e.	¶3-2000	3885
A. E. Meyer 1-A-18, c ne ne 18-21s-36e	¶1-1500	3914
Gypsy Oil Co., A. F. Houston 1, c se se 7-21s-36e	¶4½-835	3917

COLORADO

ARCHULETA COUNTY—		
Oil City Petroleum Co., Garnett 2-X Lot 3, ne se 25-33n-52e	25	979

*Failures; †Junked; ¶Million cu. ft. gas.

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Good Wells Are Finished in California

Los Angeles.—Late completions in California include Dunlap Oil Company's Number 1 at Playa del Rey for 2000 barrels initial production but was pinched to 160 barrels. Union Oil Company Vidor 7, in the same field, was good for 3500 barrels and also pinched at once due to scarcity of storage.

Standard Oil Company's Number 4-35J at Kettleman Hills started flowing at 7900-barrel rate.

Union Oil Company also completed Kernco A-3 at Mountain View for 4400 barrels, and same company's Wible 3, in the same field, started out flowing 150 barrels an hour.

California Producers Agency Name Changed

Los Angeles.—Necessary legal steps have been completed changing the name of the Oil Producers Sales Agency of California to Oil Producers Agency of California, and the by-laws of this organization of independent oil producers have been modified to provide for a continuance of its greatly enlarged activities.

The regular monthly meeting of the board of directors, held February 20, was adjourned to Monday evening, February 25, at a local cafe where the directors were guests of Ralph B. Lloyd who has served as president of the independent group for the past four years.

At this dinner meeting, the directors were hosts to a large number of independent oil operators, incident to the ceremonies involved in the installation of officers and a number of additional directors in advance of the annual meeting of members to be held in April. It is now anticipated that the executive committee of the agency will be enlarged from seven to fourteen members.

Neal Anderson Heads Coast Producers Agency

Los Angeles.—Neal H. Anderson, Long Beach oil operator and former state oil umpire, was elected Monday, February 25, as president of the Oil Producers Agency of California to succeed Ralph B. Lloyd, who has directed agency affairs for the past four years.

The retiring president was presented with a hand-embossed tribute by his co-workers on the board of directors.

Amendments to the by-laws to enlarge the scope and sphere of the activities of this group of independent oil producers were formally approved by the directors at its adjourned meeting preceding the retirement of the former president and the election of Mr. Anderson.

The present vice presidents, R. A. Broomfield, J. J. Doyle and Rush M. Blodget were re-elected, and additional vice presidents will be named when the complete board of directors is elected. The directorate has been enlarged from 21 to 35 members, and the executive committee from seven to 14 members.

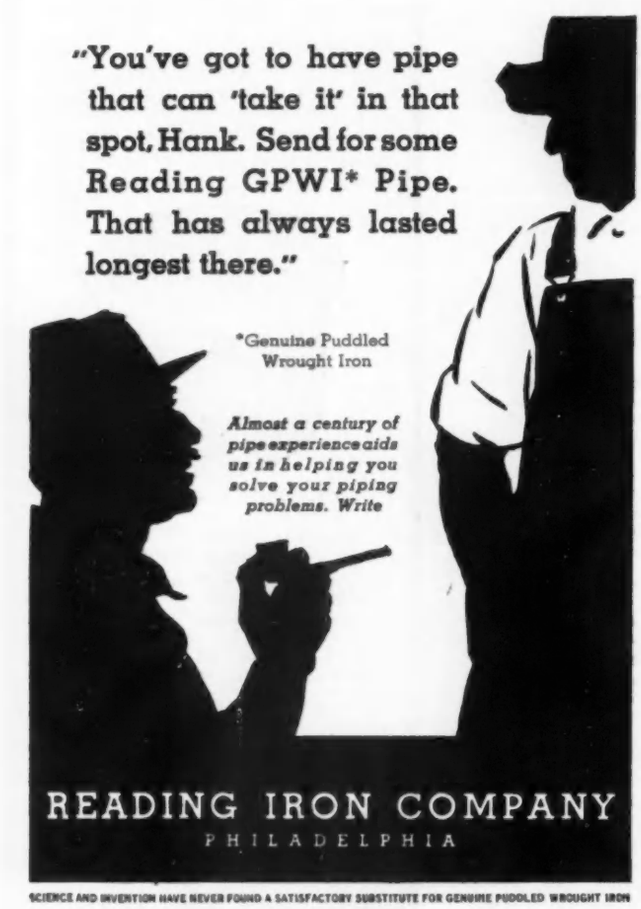
New members elected at the Tuesday meeting included Fullerton Oil Company, Bolsa Chica Oil Company, R. R. Bush Oil Company, Graham Loftus Oil Company and James E. Babcock.

Lawrence Vander Leck of the Fullerton Oil Company and Clifford W. Lord of the Bolsa Chica Oil Company were elected as directors.

The annual meeting of members of the agency will be held in April.

West Coyote

Los Angeles.—Standard Oil Company of California is the lone active company at West Coyote and is drilling three wells and getting ready to start two others within the next few days. One of the tests has bottom at 5438 feet and has cemented 8⅝-inch at 5137 feet.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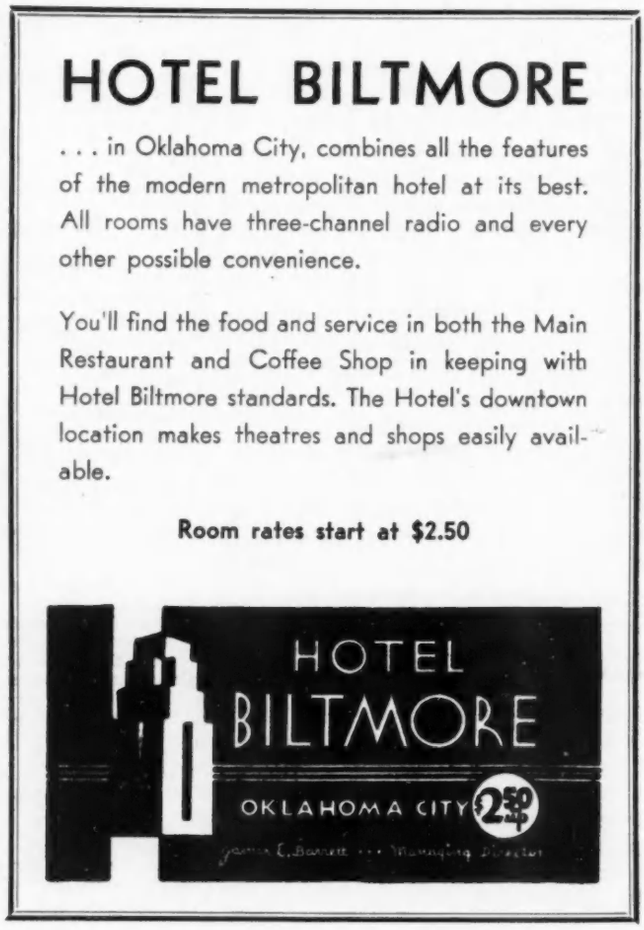
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Old Long Beach Field Most Active Area in California

Los Angeles.—Long Beach field in the Los Angeles Basin, discovered in 1921, has been doomed to take a back seat several times in the past six years, but has refused to be placed among the "has beens" in the old oil field column.

During 1934, this field reported 83 new completions with a total flush production of 19,843 barrels, its best year since 1930, when 142 new wells had a total initial production of 90,288 barrels. This field in 1928, when it was seven years of age, reported 245 new completions good for 339,168 barrels of flush production.

The allowable for the field in February was placed at 60,000 barrels a day, with actual production running a monthly average of around 65,000 barrels. The potential last November was placed at 110,455 barrels a day by the umpire, when the field had a total of 1247 wells either on production or capable of producing.

The peak production of 68,810,000 barrels was reached in 1923 and this annual production dropped to 23,101,000 barrels in 1934.

For the nine year period of 1926 to 1934, inclusive, 1085 wells were completed for a total flush production of 755,010 barrels, and these figures do not include wells worked over, drilled deeper, or plugged back. But in spite of the field's continued activity, constant drilling, and its comparatively old age, late in February, 35 wells were actively drilling, including new holes being drilled and workovers, and 10 new rigs were up and will soon be drilling. This makes Long Beach the most active field in the state, in spite of the fact that it is one of the older pools in Southern California.

The most recent activity is on the south flank of the field, where new wells are being completed at a comparatively shallow depth of 4200 to 4500 feet, the production coming from a sand passed up early in the life of the field when operators did not seem to be interested in any producing zone unless it was close to a mile in depth. Really good wells with a flush production of 250 barrels to 1000 barrels are being reported almost every week now in the most recent active area. The holes are reported to be straight down with no deviation worthy of mention, and this new activity has no connection with the flurry of drilling last year when bottom of holes were directed to points under the cemetery. In fact, the present active area is sufficiently removed from the cemetery to preclude any crooked hole drilling of this kind.

New locations are being announced practically every week until it is almost assured that more new wells will be drilled in 1935 than in 1934.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
DOMINGUEZ—		
Shell, Reyes 63	1420	4950
ATHENS—		
F. A. Speik, Johnson 1	*	5201
FRUITVALE—		
Western Gulf, K. C. L. 16	100	3930
McKITTRICK—		
Welport Oil Co. No. 10	150	1285
MOUNT POSO—		
Shell, Vedder Rall 7	450	1968
ELWOOD—		
Bankline Oil Co., Permit 89-8	40	3156
MESA—		
Rio Grande, Perkins 6	830	2015
VENTURA AVENUE—		
Shell, Taylor 84	1000	5650

*Failures; †Junked; ¶Million cu. ft. gas.

Hard to Keep Wells at Playa del Rey Straight

Los Angeles.—D. D. Dunlap Oil Company's Del Rey 1, in the Playa del Rey extension of the Venice field, is about ready to be tested on the swab. The total depth is 6562 feet, 6⅝-inch was cemented at 6225 feet, and 400 feet of 5¾-inch liner, including 347 feet of perforated, was landed on bottom. Running of 2½-inch is now in progress.

Some think this hole has drifted to the east, thus explaining its depth. One well in the field drifted to such an extent it had to be plugged back for a redrill job.

Still another well, Big Ben Oil Company's No. 1, is coring at 6620 feet, without having found the oil sand, and it has probably drifted also.

Mammouth Oil Company's No. 1, picked up the oil sand at 6220 feet and is now coring at 6246 feet in the pay formation.

Six other wells in the field are drilling below 6000 feet.

Well Near Montebello Proves Disappointment

Los Angeles.—Universal Consolidated Oil Company's N-2, credited with locating a new field near Montebello in Los Angeles County, has proved to be a disappointment, and some now think it is an edge well of the so-called new field. The well was placed on the pump, when it refused to flow, and made 130 barrels 35.6 gravity clean oil, although a slug of mud comes once in a while.

Leasing activity continues and several companies have secured tracts, but no new

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locations have been announced. Concerns securing new leases include Bardeen Petroleum Company, Caminol-Star Petroleum Company, Hillman & Long, Petrol Corporation, Signal Oil & Gas Company, G. H. Star and Wilshire Oil Company.

There is a well defined opinion that the field, if a new field, lies southeast of the present producer, and those holding leases in that area are slow to sublease.

The present producer probably will be killed and cored ahead to find out the thickness of the sand. Only 100 feet of perforated pipe was landed and the gas is not there to make a big well.

California Gas Tax Shows Small Increase

Los Angeles.—California's gasoline tax for January reached a total of $3,002,-621.56, or $402,493.74 more than the tax for the first month of 1934. Companies reported total net taxable gasoline gallonage of 101,098,364 compared to 87,538,354 same month last year, and 90,884,805 in January, 1933. The gasoline tax income increased 1.5 percent in January over previous January, and 3.8 percent over same month in 1934 to January in 1933. The State Board of Equalization predicts that the gasoline tax collections in 1935 will show a definite improvement.

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Planning to Drill Two Wells for Carbon Dioxide

Los Angeles.—Notices to drill 13 new wells in California were filed with State Oil & Gas Supervisor R. D. Bush during the week ending February 16, and included two wells to be drilled in Imperial County for carbon dioxide gas. Imperial Carb-Ice Corporation will drill No. 2 in Section 2-11s-13e, and Pacific-Imperial Dri-Ice, Inc., is to start No. 10 in Section 13-11s-13e. These wells are to be drilled in Imperial Valley, near the Salton Sea, below sea level.

Geophysic Crews Are Working Merced County

Los Angeles.—Geophysic crews have recently been making a study of the area near La Grande in Merced County, and it is reported a wildcat will be started by unnamed parties before mid-summer. La Grande is nine miles northeast of the Chowchilla ranch where Pure Oil Company found a 20,000,000 cubic foot flow of gas in an 8000-foot hole. That general area is looked upon with favor by those seeking new gas fields.

El Segundo

Los Angeles.—Republic Petroleum Company is preparing to drill a new wildcat near El Segundo, in Los Angeles County, a little southeast of Shell Oil Company's Fortuna 1, which was drilled to 5372 feet and abandoned without important showings. Steel derrick is up and location is 475 feet south and 2100 feet east from northwest corner of Section 18-3s-14w.

California Stocks All Products Show Increase

Los Angeles.—California storage of all petroleum products during January showed a net increase of 376,749 barrels, the first month since July, 1934, to report a net gain, and prior to that month, it is necessary to go back to October, 1932, before another month is found where all stocks showed an increase.

During January, stocks of heavy crude oil and all grades of fuels showed net withdrawals of 909,706 barrels, but all other classifications reported net increases. Light refinable crude was up 270,504 barrels, and unblended natural gasoline was up 253,517 barrels to 2,700,357 barrels. Stocks of gasoline were up 435,475 barrels to total of 12,778,952 barrels. This does not include storage at bulk and retail service stations, and compares to 13,538,803 barrels as of January 31, 1934. Naphtha distillate storage was up 212,512 barrels in January and other miscellaneous stocks were up 114,447 barrels that month.

During the past five years, net decreases in storage of all products in California were as follows:

Year	Net Decrease—Bbls.
1934	25,540,950
1933	11,781,856
1932	1,589,524
1931	10,360,444
1930	3,784,178

Total stocks were up 44,000,000 barrels in 1929 and increased 2,340,332 barrels in 1928.

Gas Measurement to Be Discussed on Coast

Los Angeles.—In order to discus the latest developments in gas measurement, the California Natural Gasoline Association will act as host to the Pacific Coast Gas Association and the Southern California Meter Association at a joint meeting to be held on March 7 at Richfield, California.

William Moeller, Jr., president of Pacific Coast Gas Association, and a member of A.G.A.'s Gas Measurement Committee will talk on a "Proposed Revision of Gas Measurement Procedure." Mr. Moeller is widely known throughout the petroleum industry and in addition to his many and diversified activities has long been a member of C.N.G.A.'s executive committee.

B. G. Williams and C. B. Heartwell, both past presidents of Southern California Meter Association, and members of C.N.G.A.'s Committee No. 5 on Gas Measurement, will speak on the "Necessity for a New Procedure for Gas Measurement."

To conclude the technical session, P. W. Hill, chairman of C.N.G.A.'s Gas Measurement Committee and also a past president of S.C.M.A. will discuss the "Practical Aspects of Initiating a New Gas Measurement Procedure."

Unusual entertainment will be afforded when the crack pistol team of the Los Angeles Police Department gives its demonstration of fancy target shooting.

Rosecrans Field

Los Angeles.—A. N. Macrate's northeast edge deep test in the Rosecrans field is being watched with more than usual interest, due to its depth and promise of new high gravity production. The test has a total depth of 6244 feet, but trouble has been reported in the effort to cement 5¾-inch at 6215 feet. The last job was wet, and it had to be recemented for the second time. High gravity oil has been secured in this field at relatively lower depths in the past several years, but the producers had a very short life.

Blizzard Stops Michigan Activity

Mt. Pleasant, Mich.—Talbot Oil Company's McPherson 1, 3n-4e-35, Livingston County, only active deep test in Michigan, topped Trenton lime at 4991 feet, showed gas at 5069 feet and is drilling at 5114 feet in lime.

A broken reamer lodged at 4990 feet was recovered after casing had been lowered. The test probably will be abandoned if production is not encountered in the Trenton. At 3890 feet the test showed 213,000 feet of gas.

Drilling operations in Michigan were virtually at a standstill the first of the week resulting from the worst blizzard in a 10-year period. Not only side roads and lease roads were blocked with drifts but for more than 36 hours main highways were impassable. Practically all wildcat tests were shut down and more than 70 percent of drilling wells in proved areas.

Dave Beach, general superintendent of Pure Oil Transportation Company, major Michigan pipe line company, reported that the storm would not force suspension of operations at any stations, although in several areas pumping wells were shut down, making oil deliveries slow. Trains were unable to reach the Delwin loading station of Pure Oil Transportation Company, but sufficient storage was reported available to assure operation.

John Melvin's De Stoop 1, 14n-3w-2, Isabella County, located on the north flank of the old Chippewa oil pool, encountered possible commercial production in the Traverse formation at 2990 feet with the test reported to have flowed 100 barrels on the initial 45 minute gauge.

Gordon Oil Company's Woods 1, 13n-7w-29, Mecosta County, initialed 1,000,000 feet from 1396 feet in the Michigan Stray sand, indicating a new extension to the Millbrook-Belvidire-Hinton gas field.

Mt. Pleasant, Mich.—Figures just released by the State Conservation Department, Oil and Gas Division, show Michigan's 1934 natural gas production at 3,008,085,000 cubic feet. The Broomfield pool in Isabella County, producing from the Michigan Stray sand, was the chief gas producer with 1,246,886,000 cubic feet.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
C. W. Teater's Wale 2, 13n-1w, ne nw nw-22	45	3430
ISABELLA COUNTY—		
Pen Yan, Investments, Ackerman 1, 16n-4w, sw nw nw-12	*	3885
MONTCALM COUNTY—		
Gordon Oil Co.'s Woods 1, 13n-7w, c-nw nw-29	¶1	1306
Lakeside Oil Co.'s Dye 1, 15n-8w-c-ne ne-23	*	1396

*Failures; †Junked; ¶Million cu. ft. gas.

Eastern States Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
WASHINGTON COUNTY—		
Natural Gas of West Virginia, T. F. Ealy 1	¶	2813

WEST VIRGINIA

CALHOUN COUNTY—		
Mud Lick O&G Co., Bennington 2	¶	1851
Godfrey L. Cabot, Inc., Henry Knight 1	¶	2032
Howard Bros., L. F. Norman 1	¶	2168
L. & W. Riggs, M. F. Crawley 1	¶	2580
H. J. Jarvis & Co., J. S. Rogers 1	¶	1412
TYLER COUNTY—		
Howard Hall & Co., C. & A. Haught 1	3	967
DODDRIDGE COUNTY—		
Nathan Cain, Frank Finley 1	¶	2075
GILMER COUNTY—		
McCall Drilling Co., E. C. Rohrbaugh 2	¶	2158
Friendly O&G Co., H. C. Stalnaker 1	¶	1156
PLEASANT COUNTY—		
Tyler Oil Co., Wm. Johnson 1	*	878
ROANE COUNTY—		
K. M. Hunt & Co., Oscar Kelley 1	*	1852
BOONE COUNTY—		
Pure Oil Co., Federal Coal Co. 72	¶	3056
Williams Coal 261	¶	3169
WIRT COUNTY—		
Glen Roberts, Withers & Co. 1	¶	2700
CABELL COUNTY—		
R. H. Adkins & Co., Starcher 1	¶	3821
Empire State Gas Co., McCoy 1	¶	3256
Shale Gas Co., B. Beckett 1	¶	3635
PUTNAM COUNTY—		
Red House Homestead, Fee 2	¶	2557
KANAWHA COUNTY—		
S. V. Avis, Copen Hrs. 1	*	....

SOUTHEASTERN OHIO

MONROE COUNTY—		
A. W. Lucas & Co., F. E. McCauley 3	¶	1138
Gordon Greene & Co., Eliza Baker 3	¶	1150
Local Co., W. E. Bruny 2	*	1763
WASHINGTON COUNTY—		
D. T. Orndorff, Phillips Roe Jr. 4	15	1305
Kelvin Corp., H. Foreman 16	*	460

NORTHWESTERN OHIO

WYANDOT COUNTY—		
McPheron & Co., Liddie Geir 1	¶	1339
Miller & Co., Lemma Bogard 1	¶	1533

CENTRAL OHIO

ATHENS COUNTY—		
A. D. Townsend, Leo Douglass 2	¶	658
LORAIN COUNTY—		
McMillan & Co., Sylvia Jackson 2	¶	2434
KNOX COUNTY—		
H. E. Perkins, Jennie Patterson 1	*	2547
MEDINA COUNTY—		
Glen Yannayon, Glen Yannayon 3	¶	152
The Kemrow Co., Brach & Hellman 4	2	....
Ohio FG Co., Roy W. Allis 1	*	....
MEIGS COUNTY—		
Clyde Cody, W. B. Chaney 4	*	1033
O. D. Jones, Ira E. Price 14	¶	2109
Houston & Co., Nicholas Hrs. 2	¶	2005
PERRY COUNTY—		
Kachelmacher Oil Co., Hemlock Coal Co. 8	10	3670
Wiser Oil Co., Franklin King 1	¶	2841
TUSCARAWAS COUNTY—		
Frank Walton & Co., Joseph Dunlap 1	*	5482
STARK COUNTY—		
Brendel Prod. Co., Wright 1	¶	4495
Cunningham Nat. Gas Co., Wolforth 1	¶	4580
VINTON COUNTY—		
Hazlett & Walters, Dennison 1	*	465
Barton & Utsinger, Miller 1	*	500

*Failures; †Junked; ¶Million cu. ft. gas.

USE . . .
the Original Composition Valve Cups
. . . . . *and*
ELIMINATE FREQUENT RE-CUPPING

DARCOVA (Orange Label) the standard for more than thirty years under severe service at all depths.

DARVAL (Blue Label) for super-service in wells to approximately 2,000 feet in depth.

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Let them Protect YOU against Production Losses and unnecessary Labor.

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DARLING VALVE & MFG. CO.
WILLIAMSPORT, PA.

Drilling Reports on Important Wildcats

CALIFORNIA

KERN COUNTY

BUENA VISTA LAKE—Shell's B. V. A. 1, 9-32-25, dr sand and shale 4584 ft.

CALIENTE—Pennell & Kerr's No. 1, 31-29-30, dr shale 200 ft. Signal O&G Co.'s S. P. Land 1, 31-29-30, sd 2290 ft.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, sd 4325 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 1580 ft.

DEVIL'S DEN—Amerada's No. 2, 17-26-19, dr sand and shale 1440 ft. Richfield's Alferitz 2, dr brown shale 2048 ft.

NEAR EDISON—Cora Vel Pet. Corp.'s No. 1, 19-30-30, pumping water 1910 ft. H. B. Oil Co.'s Clemens 1, 6-30-30, dr shale 300 ft. Mountain View Dev. Corp.'s Spangler 1, 12-30-28, in shale and os, 5093 ft, wocs 7-in 4994 ft.

GOULD HILLS—Texas Co.'s Jared How 1, 29-29-21, dr brown shale 3948 ft.

GREEN FIELD—Big McKittrick Oil Co.'s Houghton 1, 7-31-28, dr shale 3450 ft. Formerly Sea Cliff Oil Co.

LOST HILLS—Standard's United 1, 2-26-20, dr brown shale 1945 ft.

NEAR MOUNTAIN VIEW—Hogan Pet. Co.'s Symons 1, 4-31-29, dr shale 5225 ft.

SEMITROPIC—Standard's Hill 1, 8-27-23, td 3193 ft, rebuilding rig after blowout and fire.

SOUTH BUTTONWILLOW — Seeple Oil Co.'s No. 1, 5-30-24, sd 3730 ft.

SOUTH DOME—Continental's Gatchell 28-7, 7-25-20, dr sand and shale 2840 ft.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, td 2192 ft, redr 2070 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-11-19, sd 6229 ft. Reserve O&G Co.'s Tejon Ranch 1, 2-10-19, dr conglomerate 2967 ft.

WEEDPATCH—Associated's Di Giorgio 1, 3-31-29, td 5501 ft, plug 5290 ft, swabbing water, gas and some oil.

KINGS COUNTY

ALPAUGH—Trico O&G Co.'s Magee & Stone 3, 36-24-22, td 2587 ft, wocs 8⅝-inch 2563 ft.

PYRAMID HILLS—General's Martin 1, 20-24-18, rig.

MISCELLANEOUS

FRESNO COUNTY—Russ Oil Synd.'s No. 1, 28-12-11, sd 5015 ft.

HUMBOLDT COUNTY—Texas Co.'s Eureka 1, 1-3-2, dr shale 4195 ft.

MADERA COUNY—Pure Oil Co.'s Chowchilla 1, 7-10-14, td 8400 ft, plug 8085 ft, to run liner.

SACRAMENTO COUNTY—Great American Pet. Co.'s Howard 1, 25-2-8, td 2960 ft, r to bottom.

SANTA BARBARA COUNTY

GOLETA—Shell's Bishop 1, 20-4-28, td 6805 ft, wocs 6⅝-in, 5136 ft.

LOMPOC—Lompoc Pet Co.'s Beauterbough 2, 18-7-34, td 2975 ft, wocs 7-in, 2570 ft

NAPLES—Power & Snow's No. 1, 7-4-29, dr shale 5710 ft.

SUMMERLAND—Ortega Oil Co.'s Williams 1, 16-4-26, sd 4583 ft.

SAN LUIS OBISPO COUNTY

SEE CANYON—Farrell Pet. Co.'s No. 1, 18-31-12, sd 1420 ft.

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, td 3560 ft, to plug bottom.

VENTURA COUNTY

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, rig. Daniel Fisher's Elkins 1, 5-3-19, sd 762 ft.

HOPPER CANYON—Oil Ridge Oil Co.'s Moran 3, 1-4-19, dr os 1530 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, dr shale 7670 ft.

OJAI—Continental's Pirie 1, 12-4-23, co, 1543 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned.*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west.*
oih —*oil in hole.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, sd 7615 ft.

SANTA PAULA — Edw. M. Lesperance's Boosey 1, 31-4-20, sd 570 ft. J. W. Mosher's No. 1, 22-4-21, flowing water, trace oil, 2290 ft.

SANTA SUSANA—E. N. Dakes' No. 1, 6-2-17, sd 300 ft.

SESPE—Merchants Pet. Co.'s Cochran 4, 1-4-20, r 2020 ft. Supreme Oil Co.'s No. 1, 1-4-20, bldg rig.

SHIELLS CANYON—Texas Co.'s Shiells 128, 4-3-18, td 5536 ft, wocs 8⅝-in, 4280 ft.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, td 1855 ft, wocs 8⅝-in 1510 ft.

TORREY CANYON—A. N. Macrate's No. 1, 32-4-18, td 4038 ft, to deepen.

SOUTHERN CALIFORNIA

ATHENS—F. A. Speik's Johnson 1, 2-3-14, sd 5201 ft.

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, sd 100 ft.

BREA CANYON—Pressel-Perry-Tull's Baird 1, 30-2-19, sd 4145 ft.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, sd 2698 ft.

CHATSWORTH—Marble Inv. Co.'s Deer Lake 1, 6-2-16, sd 2600 ft.

EL SECUNDO—Republic Pet. Co.'s No. 1, 18-3-14, steel rig.

FAIRVIEW—Explorers Dr. Co.'s Norris 1, 9-6-10, co 960 ft.

HAWTHORNE—Lennox Oilfields Co.'s No. 1, 4-3-14, bldg dk.

HERMOSA BEACH—Corneil Oil Corp.'s No. 1, 31-3-14, co 3900 ft. Aron H. Hover's Bryant 1, 31-3-14, td 4200 ft, plug 3940 ft, pumping water and oil.

HUNTINGTON BEACH (on Tidelands)—Black Eagle Oil Co.'s No. 1-B, permit 194, 32-5-11, standing.

NEWPORT—Si Rubel's No. 1, 14-6-10, sd 2574 ft.

PICO—Frontier Oil Co.'s No. 1, 12-2-12, dr shale 2120 ft.

PUENTE—N. O. Shively's Rowland 1, 23-2-10, td 3145 ft, to set 8⅝-in 2400 ft.

SAUGUS—Barstow Oil Co.'s Walker 1, 35-5-16, sd 2300 ft. International Oil Developers' Powell 1, 34-5-16, td 4335 ft, recemented 8⅝-in 1935 ft.

SURF—B & B Oil Co.'s B. B. 1, 19-6-10, sd 4576 ft.

RIVERSIDE COUNTY—Corona Oil Co.'s Wardlow 1, 27-3-7, rur. Great Coastal Oil Corp.'s No. 1, 35-5-5, sd 829 ft.

SAN BERNARDINO COUNTY — Great American Pet. Co.'s Gapco D-1, 18-2-8, sd 305 ft.

MICHIGAN

MIDLAND COUNTY — Goll-Graves-Mechling's Oviatt 1, 16n-2e, sec 24, sd 950 ft. Foster & Wicklund's Neal 1, 16n-2w, sec 13, dr 1500 ft. Howard Patterson's Haskins 1, 13n-2e, sec 26, csg 3701 ft.

ISABELLA COUNTY — Pure Oil Co.'s Baker 1, 13n-5w, sec 15, dr 3815 ft.

OGEMAW COUNTY—Lupton Oil Co.'s Rakestraw 1, 24n-3e, sec 35, rig.

MONTCALM COUNTY—L. E. Duvall's Eiknorch 1, 11n-10w, sec 13, sd 1343 ft. J. W. Leonard's Durbin 1, 10n-5w, sec 11, dr 1400 ft. Golden Oil Co.'s Christensen 1, 10n-8w, sec 5, dr 800 ft.

MECOSTA COUNTY—Jetter Oil Co.'s Parsley 1, 14n-10w, sec 19, fsg 275 ft. Columbia Oil Co.'s Freman 1, 13n-8w, sec 24, sp. Jasmid Oil Co.'s Coopersville Bank 1, 13n-10w, sec 22, sd 850 ft.

GLADWIN COUNTY—M. F. Whitehill's Spicer 1, 17n-2w, sec 11, rig. Roosevelt Oil Co.'s Haviland 1, 17n-2w, sec 4, dr 2400 ft. Sun Oil Co.'s Heintz 1, 17n-1w, sec 31, dr 400 ft. Beaverton Oil Co.'s Ross 1, 17n-1w, sec 7, rig.

LIVINGSTON COUNTY—Talbot Oil Co.'s McPherson 1, 3n-4e-35, dr 5112 ft. H. Snell et al's Zebb 1, 2n-5e, sec 34, sd 5017 ft.

MISC.—Gratiot County: Chas. Weller's Baker 1, 9n-3w, sec 9, sd 900 ft. Arenac County: McClanahan Oil Co.'s Heath Ranch 1, 19n-3e, sec 31, rig. Allegan County: Bear Creek Development's Fors 1, 3n-14w, sec 29, sd 1850 ft. Roscommon County: Black Diamond Oil Synd.'s Vaughan 1, 24n-4w, sec 28, re-csg 3250 ft. Tuscola County: W. F. Weicher's Gray 1, 12n-8e, sec 8, sd 2400 ft. Lapeer County: C. M. Holley's Thom 1, 8n-9e, sec 9, fsg 600 ft.

NEW MEXICO

EDDY COUNTY—Geo. F. Getty Oil Co.'s Andrew Dooley 7, swc nw 24-20s-29e, 6000-ft test, elev 3309 ft, sd 230 ft.

LEA COUNTY—Amerada Pet. Corp.'s State 1-D, c nw nw 1-20s-36e, elev 3590 ft, top anhydrite 960 ft, logged salt 1060-2255 ft, so 3495-98 and 3903-06 and 3912-20 ft, td 3929 ft, completed flowing 900 bbls 32½ gravity oil daily on gas lift. Anderson-Prichard Oil Corp.'s Fisher 1, c se ne 8-20s-35e, mim; Brett-Conoco 1, c ne nw 7-20s-37e, mim. Anderson-Prichard & Repollo Oil Co.'s B. W. Arnold 1, swc nw se 11-20s-38e, rig. Argo Royalty Co.'s Byrl A. Burner-Texas Co. 1, near c ne ne 6-20s-32e, elev 3513 ft, cem 8¼ inch casing 1130 ft. E. B. Guess et al's C. W. Justice 1, swc nw nw 20-25s-37e, sd 1060 ft. R. H. Henderson et al's P. J. Langley 1, c se se 8-25s-37e, elev 3162 ft, fsh 703 ft; Russell-Steele 1, c ne nw 24-20s-33e, elev 3627 ft, dr 2710 ft. Humble's J. L. Coates 1, c nw ne 10-24s-36e, elev 3383 ft, top brown lime 2996 ft, junked gasser, td 3355 ft, sd for relief well to kill and abn; Coates 1-A, elev 3385 ft, cem cas 403 ft; F. M. Saunders 1, c ne ne 4-22s-34e, elev 3641 ft, dr 1260 ft. Maljamar O&G Corp.'s P. Miller 1, c nw sw 23-17s-32e, rig. Nat'l Securities Oil Corp.'s V. Linam 1, nec s½ sw 33-18s-37e, elev 3712 ft, top anhydrite 1580 ft, logged salt 1716-2650 ft, top lime 2956 ft, dr lime 4305 ft. Ryan Consolidated Pet. Corp.'s Acree 1, c ne nw 35-20s-32e, elev 3568 ft, dr brown lime 2970 ft. Shell Pet. Corp.'s State-Endura 1, ce se ne 12-21s-35e, elev 3588 ft, top anhydrite 1453 ft, logged salt 1533-2865 ft, top lime 3020 ft, tested sulphur w at 4404 ft and pb to 4047 ft. The Texas Co.'s Anna C. Moore 1, c nw se 21-20s-32e, elev 3508 ft, cem 8¼ cas 2975 ft. The Texas Co.-Amerada & Columbian Carbon Co.'s Parker 1, c nw nw 29-26s-37e, cem 12½-

in cas 164 ft. W. L. Todd and The Texas Co.'s Fred Cole 1, c ne ne 35-19s-33e, rig. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, rig.

McKINLEY COUNTY—Cooperative Producers & Refiners Co.'s No. 1 sw 22-20n-9w, Red Mountain district, lcn. Bennett & Lingenfelter's No. 1, nw 29-20n-9w, lcn. Linn McCoy's No. 1 ne 33-20n-9w, lcn. Royer Oil Co.'s Santa Fe Railroad 1, nw sw 13-15n-10w, abd at 1027 ft.

ROOSEVELT COUNTY—Claudell Development Co.'s Wilmes 1, sw se 21-2s-30e, dr at 2560 ft.

SAN JUAN COUNTY—Kutz Canyon Oil & Gas Co.'s Day 1, sw sw 20-28n-10w, dr at 4280 ft in shale and lime shells. Phillips & Healy's No. 2, sec 34-30n-11w, dr at 200 ft.

VALENCIA COUNTY — Western Natural Resources Corporation's De Chavez 2, sw ne 5-6n-1e, testing so at td of 6100 ft.

MONTANA

CHOTEAU COUNTY — Mills & Decker's Test 1, ne nw 29-27-13e, Little Sabdy Dome, lcn.

WYOMING

ALBANY COUNTY—S. Marvin James Co.'s Hindry 1, sw 10-33n-76w, Riverside structure, preparing to resume at 1515 ft.

BIG HORN COUNTY—Wyoming Oil & Refining Co.'s Evans 1, ne nw 12-49n-91w, spd. Yale Oil Corporation's Blakesly 1, ne ne nw 28-49n-91w, dr at 900 ft.

CARBON COUNTY—Ohio Oil Co.'s Morris 1, cnw se 6-20n-77w, dr 647 ft. California Co. and Ohio Oil Co.'s Kyle 1, ne se ne 26-21n-79w, dr at 4503 ft. Earl W. Readers, Inc.'s Whitford 1, sw se se 24-20n-84w, changing to cable tools to dr in at 3590 ft. Readers' Union Pacific 1, csw sw 19-20n-83w, sd 5930 ft. Argo Oil Co.'s Frank Johnston-Union Pacific 1, ne ne se 5-24n-87w, plg back from 3500 ft to 2835 ft to test the Muddy sand.

FREMONT COUNTY — Mid-American Oil Co.'s Government 2, cne sw 14-28n-92w, dr out plug with 8-in csg at 1660 ft.

COLORADO

ADAMS COUNTY—Riddle Petroleum Co.'s Baxter 1-C, sw 2-3s-66w, Derby Dome, rur preparatory to spd in.

ARCHULETA COUNTY—Oil City Petroleum Co.'s Garnett 2-X, Lot 3, ne se 25-33n-52e, completed at 979 ft for 25 bbls of oil daily.

LINCOLN COUNTY — Consolidated Smelting & Metals Corporation's Hancock 1, nw nw se 7-17s-52w, dr at 1150 ft in shale.

PROWERS COUNTY—Trojan Oil & Gas Co.'s Lotus 1, nw ne ne 15-23s-46w, dr at 4848 ft.

KANSAS

RENO COUNTY — Privett Drilling Co.'s Crotts 1, ne nw ne 27-26s-10w, (owdd), set 8-in csg 3498 ft, hfw 3632-42 ft, dr 3675 ft. Johnson & Carey et al's Dyck 1, se ne se 35-22s-5w, dr plug and hfw. Kessler-Thier & Skelly's Bigger 1, ne se sw 29-23s-6w, td 4150 ft, D&A. Bradley's Olmstead 1, sw sw sw 22-22s-7w, mim.

RICE COUNTY—Allison & Fitzwilliams et al's Stumps 1, nw nw sw 4-18s-10w, dr 1775 ft. Foraker-Nickerson et al's Lyon 1, se se ne 27-20s-8w, set 10-in csg 2340 ft, co. Vickers Pet. et al's Gouldner 1, se ne nw 16-18s-9w, ru. Langston et al's Markle 1, ne ne sw 1-20s-9w, hfw 3014 ft, dr 3070 ft. Day's Mason 1, nw ne ne 28-21s-7w, mim. Gypsy Oil Co.'s Keesling 1, nw nw sw 10-20s-9w, dr 2200 ft.

ROOKS COUNTY—Stearns-Streeter et al's Hoskins 1, se sw se 34-9s-16w, pb 3076 ft, sd. Carman & Hershey's Nelson 1, nw nw ne 27-10s-16w, rig. Tree Oil Co. & Findeiss' N. Johnson 1, sw sw se 26-10s-19w, lcn.

RUSH COUNTY—Flynn et al's Hartman 1, sw se nw 4-18s-16w, rig. Lario Oil & Gas Co. & Phillips Pet. Co.'s Benbow 1, nw ne ne 12-17s-19w, fsg 3185 ft.

RUSSELL COUNTY—Lario Oil & Gas Co. et al's Moore 1, se se nw 34-13s-12w, hfw 3080 ft, set 8-in csg 3120 ft, td 3320 ft, running 6-in csg. J. Brouk & R. D. Bailey's Kluesner 1, nw nw se 34-15s-12w, ru. Wolf Creek et al's Donovan 1, sw sw se 10-15s-15w, pumped 153 bbls oil and 30 bbls water, comp. ElDorado Refining Co.'s Walz 1, se ne nw 29-13s-11w, dr 2620 ft. Hartman & Blair's Krause 1, ne nw nw 5-15s-15w, sd 2528 ft. Wolf Creek et al's Penn Mutual 1, sw sw sw 22-15s-15w, cellar. Hartman & Blair's Furthmeyer 1, ne ne ne 19-12s-13w, dr 1910 ft. Hartman & Blair's Garrett 1, sw sw nw 24-13n-12w, mim. Murphin's Funk 1, sw sw sw 19-12s-13w, spd and sd. Reserve et al's Moore 1, cnw nw sw 15-13s-12w, cellar. Hartman & Blair's Hildebrandt 1, nw ne sw 12-14s-14w, lcn. Hartman & Blair's Sullivan 1, ne ne se 2-14s-15w, pumped 220 bbls oil, comp.

SALINE COUNTY—Dieter et al's Herrington 1, ne nw se 3-13s-1w, dr 2630 ft.

SEDGWICK COUNTY—Allison & Fitzwilliams' Struthers 1, ne sw sw 34-28s-2w, fsg 3295 ft. Syndicate Oil & Gas Co et al's Ratzlaff 1, ne nw nw 30-26s-2e, set 8-in csg 2912 ft, co 2980 ft. Aladdin Petroleum et al's D. Lauck 1, se ne nw 21-28s-2e, td 2968 ft, running 6-in csg. Magnolia Pet. Co.'s Bartholomew 1, se se sw 30-27s-4w, dr 3956 ft.

STAFFORD COUNTY—Atlantic Oil Co. & Phillips Pet Co.'s Guthrie 1, cnw nw 15-25s-11w, sso 3460-70 ft, sg 3528-30 ft, 1 bbl water 3550 ft, dr 3580 ft. Atlantic Oil Co.'s Hohner 1, nw se se ne 31-23s-14w, td 4085 ft, rust. Lario Oil & Gas Co. et al's Tudor Morgan 1, se se nw 23-24s-13w, lcn.

SUMNER COUNTY—Tom Palmer's Wentworth 1, nw nw ne 9-35s-2e, so 3400 ft, est 1 million gas 3420 ft, td 3423 ft, est 30 bbls oil 12 hrs. D. J. Wilson et al's Clark 1, csl nw 15-35s-1w, mim. Wakefield et al's Newton 1, se se se 21-30s-2e, rig. Shell Pet. Corp.'s Green 1, se sw nw 3-33s-2e, br.

TREGO COUNTY — Central Commercial Drilling Co.'s Wagg 1, nw nw se 17-13s-21w, fsg 1600 ft. A. D. Morton's Jones 1, se se se 20-12s-23w, ru.

OKLAHOMA

ATOKA COUNTY—H. F. Potts' Nichols 1, sw sw nw 32-2s-9e, dr 1300 ft. Malernee et al's D. K. O. Land Co. 1, cse se 35-2s-13e, sd 3115 ft.

BECKHAM COUNTY—Fred Coogan et al's Shelton 1, sw sw sw 33-10n-25w, dr 735 ft.

BRYAN COUNTY—C. B. Welch's M. Collins 1, sw sw nw 19-8s-8e, mach. Trio Oil Co.'s Gilbert 1, se se se 25-8s-7e, mach.

CADDO COUNTY—H. W. Lee et al's Stacy Ferrel 1, sw ne ne 3-6n-13w, lowering 8-in csg. Denver P. & R. Co.'s Noe 1, nw sw sw 34-10n-10w, est 200 bbls oil 48 hrs.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 3, sw ne sw 27-2s-3w, dr 2865 ft. Waco Turner's A. F. Munson 1, ne nw ne 35-5s-2w, mir.

CLEVELAND COUNTY — Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, sd 2769 ft.

COAL COUNTY—W. A. Delaney's Diamond 1, nw nw se 5-1s-8e, hfw 2650-70 ft, D&A.

COMANCHE COUNTY—F. F. Stevens' Green 1, se se sw 2-1n-13w, dr 1280 ft. H. W. Baker's Miller 1, se sw se ne 22-2n-13w, sd 120 ft. Henry Rosenthal et al's Au-chi-re-ah 1 "B", nw nw nw 5-1n-9w, td 1493 ft, wocs. Oscar Jones' Sheetz 1-A, ne ne sw 26-3n-10w, mach.

GARFIELD COUNTY — Herndon Drilling Co. et al's Allen 1, cne ne sw 35-24n-3w, dr 1930 ft.

GARVIN COUNTY — National Producing Co.'s Littrell 1, ne ne ne 31-2n-3w, set 6⅝-in csg 1244 ft, dr 1267 ft. Anderson-Kerr Drilling Co.'s Riley 1, se se nw 2-4n-1w, td 5776 ft, D&A. George L. Pace's Smith 1, sw sw ne 35-1n-1e, spd and sd. Charles E. Carter et al's Wood 1, nw sw se 5-4n-3e, dr 1595 ft.

GRANT COUNTY — Helmerich - Payne's Crouse 1, cne sw 29-25n-8w, set 8-in csg 6026 ft, td 6036 ft, rust.

GREER COUNTY—Fred Morgan et al's H. G. Carder 1, csw se 19-4n-22w, rog.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, set 5-in csg 598 ft, wocs. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, sd 950 ft. Turner et al's Williams 1, csw sw sw 35-7n-10e, sd 538 ft.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se se sw 16-2n-21w, dr 650 ft. Scheig's James 1, ne ne ne 23-1n-20w, sg 1582-90 ft, sd 1752 ft. Associated Oil Co.'s Harrell 1, ne ne sw 13-1s-21w, dr 150 ft. Selby Oil Co.'s R. C. Holt 1, se se sw 15-2n-20w, dr 75 ft. Petroleum Prod. Co.'s Cole 1, sw sw se 34-2n-20w, dr 1451 ft, oil exhausted, est 25 bbls oil daily. Whatley & Whatley's Holt 1, nw sw se 20-1n-20w, dr 265 ft. Scheig et al's C. W. Cole 1, ne se se 5-1n-20w, dr 285 ft. A. H. Emenhiser's Murrell 1, se sw se 17-3n-21w, spd and sd. Jack Kilgore et al's Wooldridge 1, se se ne 15-3n-21w, lcn. Golden & Cochran's L. H. Duncan 1, sw sw ne 34-2n-21w, mach. Scheig Oil Co. et al's Sue Richardson 1, sw nw se 30-1n-19w, lcn.

JEFFERSON COUNTY—Farlyn Oil Co.'s Seay 28, nw se se 3-7s-5w, dr 100 ft.

KAY COUNTY — Harris-Haun's Schuessler 1, cnw sw 3-28n-2e, cement cave, td 2325 ft, wocs. Max Kelly's Spore 1, nw nw se 17-27n-2e, lcn.

KINGFISHER COUNTY—Black Gold Pet. Co.'s Cole 1, csw ne 24-18n-5w, td 6137 ft, lost circulation, cemented 500 sacks, wocs.

LINCOLN COUNTY—Charles Balph et al's Young 1, cn½ nw nw 23-15n-5e, sd. Slick-Urschel et al's Miller 1, nw nw se 25-15n-3e, cored 4041-51 ft. Sinclair Prairie Oil Co.'s Hoyt 1, nw sw ne 5-14n-3e, acidized 1000 gal, flow 180 bbls oil 24 hrs comp.

LOGAN COUNTY — Sinclair Prairie Oil Co.'s School Land 1, se se se 36-17n-1w, td 5335 ft, rust and sd. Shell Pet. Corp. et al's Hirzel 1, se sw sw 7-16n-2w, cored 5676-92 ft, ur to core ahead. Slick-Urschel's Pennington 1, csw ne 10-16n-1w, dr 3745 ft. J. C. Shaffer et al's Watson 1, cnw ne 15-15n-4w, dr 2040 ft. Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, dr 3175 ft.

LOVE COUNTY—Amerada Pet. Corp. & Stanolind Oil & Gas Co.'s Westheimer & Daube 1, nw se se 27-6n-2e, dr 1620 ft.

MARSHALL COUNTY — Paul R. Robb's Vittetoe 1, cne se 11-5s-4e, dr 5094 ft.

McCURTAIN COUNTY—J. V. Schrivner et al's Central Life Association 1, ne sw sw 24-6s-21e, sd.

MURRAY COUNTY—Equitable Oil & Gas Co.'s Scott 1, csl n½ nw sw 15-1s-3e, set 8-in csg 1154 ft, dr 1237 ft. Manahan Oil Co.'s Ward 1, ne se nw 18-1s-3e, tight hole 1000 ft. Gillette & Kroeger's Robbins 1, ne ne se 31-1n-6e, rog. Equitable Oil & Gas Co.'s Baer 1, sw nw nw 21-1s-3e, cellar.

NOBLE COUNTY—Marathon Oil Co.'s Gilbert 1, ne ne ne 24-22n-2e, sd 4480 ft.

OKFUSKEE COUNTY—Mid-Continent Pet. Corp.'s Haney 1, sw se ne 24-12n-8e, td 4145 ft, to dd. Amerada Pet. Corp. et al's Jaynes 1, nw nw sw 20-10n-10e, ur 8-in csg 3687 ft.

OKLAHOMA COUNTY—R. Carl Larkin's Brobine 1, sw sw ne 33-13n-5w, rig. Anderson & Kerr et al's Linn 1, sw sw nw 17-14n-2w, br. W. H. Atkinson et al's Reed 1, ne ne ne 4-12n-3w, rur, bailers and sd.

PAYNE COUNTY—Marathon Oil Co.'s Potts 1, csw sw 27-19n-2e, dr plug and got water, pb 4510 ft, wocs.

PITTSBURG COUNTY — McAllister Pet. Co.'s Chunn 1, se se nw 29-4n-14e, set 12-in csg 1530 ft, collapsed, sd. P. H. Gray et al's Lee 1, nw nw se 12-5n-13e, dr 1050 ft.

PONTOTOC COUNTY—J. D. Sledge & Jack Lynch's Thompson 1-A (twin), sw ne sw 1-1n-7e, swedge pipe 3993 ft, flow average 65 bbls oil daily. Southern Oil Corp.'s Ladd 1, cnw nw 27-3n-7e, hfw 2416 ft, D&A. Paramount Oil Co.'s Graham 1, sw se sw 13-1n-2e, dr 2980 ft. H. M. Marcum's Magnuson 1, sw se se 23-2n-7e, dr 1770 ft. Mudge Oil Co.'s Clampett 1, sw nw nw 10-2n-6e, sd 815 ft. Southern Oil Corp.'s Vierson 1, ne ne se 17-3n-7e, mach. Crabb-Craw Oil Co.'s Breco 1-A, se ne sw 3-4n-6e, pumped 10 bbls oil 24 hrs. Southern Oil Co.'s Walker 1, nw nw sw 11-4n-6e, sd 820 ft. Crabtree's Chandler 1, ne se sw 4-5n-6e, dr 110 ft. Gillette & Kroeger's Duver 1, nw nw se 36-1n-6e, sd 1162 ft.

POTTAWATOMIE COUNTY—C. W. James et al's Neal 1, nw se sw 4-5n-3e, dr 3533 ft.

PUSHMATAHA COUNTY—William Ungerman et al's Messer 1, se sw sw 35-3s-18e (owdd), td 2795 ft, 600 ft oih.

SEMINOLE COUNTY — Verser & Clay's Thomas 1, ne se nw 1-6n-6e, sd 2802 ft. Ray Dorris & J. T. Hall's Dorris 1, se se sw 31-10n-7e, sd 281 ft. Wofford Drilling Co.'s Abbott 1, ne ne ne 33-8n-7e, rig. Wofford Drilling Co. et al's Thomas 1, nw nw se 8-6n-7e, dr 3200

ft. Atlantic Oil Co.'s Thompson 1-A, sw se se 15-11n-8e, td 2800 ft, D&A.

STEPHENS COUNTY—Wm. Angle's Calloway 1, se se ne 17-1n-8w, lcn. J. W. Madison's Tussey 1, sw se nw 24-1n-4w, (owdd), rig down and dr pipe in hole, sd.

WASHITA COUNTY—Anadarko Basin Oil Co.'s Ash Wolf 1, ne ne sw 23-9n-17w, ru and sd.

KANSAS

BARBER COUNTY—Southern Drilling Co. et al's Davis 1, sw se ne 13-34n-15w, sd 2960 ft.

BARTON COUNTY — Atlantic Oil Co.'s Vaniman 1, csw ne 15-20s-12w, running tubing. Treleaven & Brimm et al's Hass 1, sw nw sw 30-18s-15w, running 2½-in tubing. Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, lcn. D. I. Hall et al's Arnold 1, se sw 19-18s-15w, mit. Wolf Creek's Kraft 1, sw sw sw 26-16s-11w, rig. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, ponds. McMorrow & Spencer's Hagen 1, se ne ne 33-20s-11w, rig.

BUTLER COUNTY—Gaines et al's McKinley 1-A, ne ne sw 19-29s-4e, td 1950 ft, pumped 10 bbls oil, comp. Hay & Cameron's Johnson 1, nw nw se 16-26s-6e, lcn. Trees & Harwood's Henley 1, sw se ne 7-24s-8e, br.

CLAY COUNTY—Seidel Brothers' Younken 1-A, cs½ se nw 21-9s-4e, sd 1730 ft.

COWLEY COUNTY—Lassen's Ferguson 1, se se nw 21-30s-8e, 1000 gal acid and pumped 60 bbls oil. A. McCoy's Brandenburg 1, sw sw se 17-34s-5e, rig.

DICKINSON COUNTY—Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd 2703 ft.

ELK COUNTY—Lee Tiffy et al's Stonebreaker 1-A, se se se 32-28s-11e, dr 960 ft.

ELLSWORTH COUNTY—Carter Oil Co. et al's Teubner 1, se se nw 26-17s-9w, set 8-in csg 2015 ft, 1 million ft gas 2415 ft, dr 2450 ft. Pryor & Lockhart et al's Gregory 1, se se se 19-16s-8w, spd. Lario Oil Co. et al's Wright 1, sw sw ne 17-16s-8w, rig. Lario Oil Co. et al's Central National Bank 1, se se nw 33-15s-8w, lcn. Lario Oil & Gas Co. et al's State 1, sw sw sw 29-15s-8w, cellar.

HARVEY COUNTY—H. H. & S. Oil Co.'s Frizzle 1, ne ne se 31-23s-2w, cellar.

KINGMAN COUNTY—Sam Jarvis et al's Morrissee 1, csw ne 23-30s-10w, rig.

McPHERSON COUNTY—Lario Oil & Gas Co.'s Schrag 1, nw se sw 22-19s-4w, set 6-in csg 3448 ft, dr 3783 ft. Lario Oil & Gas Co.'s Base 1, sw sw sw 22-20s-2w, dr 3192 ft. Palmer Oil Corp.'s Swenson 1, ne ne sw 11-18s-3w, set 15-in csg 70 ft, dr 555 ft. Brosius et al's Hanson 1, ne ne sw 15-17s-2w, ru. Shell Pet. Corp.'s Wenger 1, ne ne ne 2-20s-1w, rog. Carey & Miller's Husband 1, se se nw 6-19s-3w, mim.

OSAGE COUNTY—Jim Edwards Deitrick 1, cnw se 21-14s-15e, sd 590 ft.

NESS COUNTY—Texas Co. & Gypsy Oil Co.'s Goodman 1, csw sw 21-19s-23w, set 5-in csg 4583 ft, dr 4640 ft. Phillips Pet. Co.'s Young 1, cnw sw 13-18s-21w, rog.

WEST TEXAS

ANDREWS COUNTY — Fuhrman Pet. Corp.'s W. H. Boner 2-B, sec 25, blk A-43, PSL sur, top anhydrite 1710 ft, top salt 1730 ft, dr 3950 ft. Humble Oil & Ref Co.'s J. S. Means 3, c nw ne sec 9, blk A-35, PSL sur, dr 2490 ft; R. M. Means 3, se¼ sec 4, blk A-45, PSL sur, elev 3177 ft, top anhydrite 1876 ft, top salt 1920 ft, top Yates sand 2861 ft, top gray lime 4125 ft, dr 4390 ft; R. M. Means 4, lcn. Lou Stogner & A. E. Service Drl. Co.'s J. W. Richards-McWhorter 1, c se ne sec 4, blk A-37, PSL sur, dr 1265 ft. W. T. Walsh et al's J. E. Parker-Llano 1, c sw se sec 2, blk A-54, PSL sur, lcn. · R. L. York & O. C. Harper's Hereford 1, c labour 12, league 315, Palmer co. S. L. sur, top anhydrite 2280 ft, dr 2310 ft. E. M. Wahlenmaier Pet. Corp.'s Odessa Ranch-The Texas Co. 1, c ne¼ sec 10, blk A-32, PSL sur, mim; Cox 1, c nw nw sec 8, blk A-35, PSL sur, lcn.

BORDEN COUNTY—John I. Moore et al's Clayton-Johnson 1, sec 29, blk 32, T&P Ry. sur, T-4-N, lcn.

BREWSTER COUNTY—Floyd C. Dodson et al's Texas American Synd. 1, c ne ne sec 66, blk 10, H&GN Ry. sur, deep test, lcn. C. M. "Dad" Joiner et al's W. J. McIntyre 1, sec 31, blk 352, W. J. Mitchell sur, co 2100 ft. K. H. King & C. R. Franklin's A. S. Gage 1, sec 138, blk B-22, GH&SA Ry. sur, ur 603 ft. S. G. Smith et al's Mrs. Ed. Decie 1, nwc se¼ sec 7, blk 1, G.T. Ry. sur, sd 670 ft. G. H. Storey et al's Jim P. Wilson 1, c nw se sec 3, blk 212, T.&St.L. sur, lcn.

CRANE COUNTY—Gulf Prod. Co.'s W. N. Waddell et al 1, c nw nw sec 4, blk B-27, PSL sur, Ordovician lime test, elev 2554 ft, top salt 510 ft, dr 3100 ft. Wahlenmaier Pet. Corp. et al's TP Land Trust 1, sec 33, blk 44, T&P Ry. sur, T-3-S, top anhydrite 1100 ft, top salt 1325 ft, dr 2410 ft.

CROCKETT COUNTY—Humble O&R Co.'s S. E. Couch 1, c nw sec 3, blk "QR," D&SE Ry. sur, Ordovician lime test, dr 1840 ft. E. C. Leslie and Hiller's J. S. Todd 1, sec 26, blk "WX," GC&SF Ry. sur, sd 580 ft.

CULBERSON COUNTY—Anderson-Prichard Prod. Corp.'s H. A. Borders 1, sec 34, blk 69, elev 4565 ft, dr 895 ft. Miller et al's fee 1, sec 21, blk 97, PSL sur, sd 2100 ft. Nelwood Drl. Co.'s A. L. Hall 1, sec sec 11, blk 54½, PSL sur, sd 200 ft.

JEFF DAVIS COUNTY—C. M. "Dad" Joiner et al's Jones-Coffield 1, sec 8, blk 3, H&TC Ry. sur, set 15½-in csg 645 ft.

DAWSON COUNTY—Fred Turner and Harry Adams Corp.'s John Robinson 1, c nw sec 46, blk "M," EL&RR Co. sur, elev 3078 ft, top salt 1970 ft, top lime 2885 ft, sg 3280 ft, dr 3325 ft.

ECTOR COUNTY—Empire G&F Co.'s E. H. Cummins 1, sec se¼ sec 10, blk 45, T&P Ry. sur, T-1-N, mim. Gulf Prod. Co.'s C. A. Goldsmith 1, c nw sec 10, blk 44, T&P Ry. sur, T-1-S, ur 925 ft. International Pet. Corp.-O. C. Harper's E. F. Cowden 1, c se se sec 25, blk 44, T&P Ry. sur, T-2-S, top anhydrite 1600 ft, dr 1650 ft. Landreth Prod. Corp. et al's Frank Cowden 1, swc sw¼ sec 18, blk 44, T&P Ry. sur, T-1-N, dk; Clarence Scharbauer 1, sec nw¼ sec 13, blk "A," PSL sur, lcn. Neville G. Penrose et al's A. Kloh-TP Land Trust 1, nwc w½ se sec 31, blk 45, T&P Ry. sur, T-1-S, elev 3154 ft, top anhydrite 1290 ft, top salt 1375 ft, dr 1840 ft.

FISHER COUNTY—Tide Water Oil Co. and Merry Bros. & Perini, Inc.'s E. Howard 1, elev 1849 ft, ne¼ sec 180, blk 2, H&TC Ry. sur, flowed oil and w by heads fr lime 3672-77 ft, pb to 3675 ft.

GLASSCOCK COUNTY—John I. Moore-Loffland Bros. et al's L. S. McDowell 1, sec 22, blk 34, T&P Ry. sur, T-2-S, Ordovician lime test, elev 2534 ft, top lime 2137 ft, top Crinordial lime 9471 ft, sg 9484 ft, so (43.7 gravity) 9510 ft, td 9520 ft, sd for 7-in csg; McDowell 1, lse 2, nwc se¼ sec 21, dr 250 ft.

JONES COUNTY—Frank Oyster & Putman Oil Co.'s J. J. Steele 1, Lot No. 8, C. Allen sur No. 10 A-500, lcn. Coltex Oil Co.'s H. N. Smith 1, se¼ sec 25, T&P Ry. sur, blk 19, dr 1310 ft. Fondren Production Co.'s Sam R. Cox, Jr. 1, sec 74, blk 14, T&P Ry. sur, lcn. Dr. C. E. Johnson et al's W. T. Young 1, blk 190, B. Trevino sur, dr 1155 ft. H. T. Owens et al's Dunwoody-Jobson 1, sec 6, blk 17, T&P Ry. sur, sp and sd.

LOVING COUNTY—Mason Oil Co.'s M. Kyle 1, c nw se sec 22, blk 55, T&P Ry. sur, sp and sd.

LYNN COUNTY—Edgar T. Hart & Wanete Oil Co.'s C. O. Edwards 1, se¼ sec 29, blk 1, L&SV Ry. sur, elev 3112 ft, top anhydrite 1690 ft, top salt 1945 ft, sd for repairs in broken lime 3950 ft.

MARTIN COUNTY—S. E. Wright & Ralph Scott's F. W. Flanagan 1, nec sec 22, blk 37, T&P Ry. sur, T-1-S, sp and sd.

PECOS COUNTY—Gulf Prod. Co.'s White-Baker 4, swc n½ sec 46, blk "Z," T.C. Ry. sur, dr 1460 ft. Cardinal Oil Co.'s White-Baker 1, nwc w½ sw¼ sec 51, blk "Z," TC Ry. sur, sp and sd. International Pet. Corp.'s White-Baker 1, nec se¼ sec 4, blk 207, TC Ry. sur, sp and sd. Trans-Texas Oil Co.'s C. M. Caldwell 1, sec sec 27, blk 50, T&P Ry. sur, Tsp 9, sd 1680 ft.

REAGAN COUNTY—Dobbs Oil Co.'s W. E. Friend 1 (681-ac), nwc s½ sec 3, Wm. Allen sur, so 700 ft, dr 815 ft. Byrd-Frost, Inc.'s O. F. Boyd 1, c se¼ sec 6, blk "E," L&SV Ry. sur, lcn. Skelly Oil Co. et al's University-Utah 1-D, c sw nw sec 33, blk 8, Ordovician lime test, elev 2891 ft, top Cisco 9174 ft, top Simpson 9400 ft, cem 7 in csg 9437 ft, td 9439 ft.

REEVES COUNTY—J. E. Cunningham & A. R. Eppenauer Drl. Co.'s Tiller Bros. 1, R. P. Altman sur, 1 mi nw of Toyah, drl out bridge, td 3673 ft. Rowan-Nichols Oil Co.-Cardinal Oil Co.'s E. M. Williams 1, sec 17, blk 6, H&GN Ry. sur, sp and sd. Kenneth Slack & L. M. White's Francis Reeves 1, c se nw sec 20, blk 56, PSL sur, mim.

RUNNELS COUNTY—Blaylock & Co.'s Y. J. McGaughan 1, T. M. Fowler sur No. 444, Lot No. 14, sd 535 ft. Grover Hart et al's G. W. Ash 1, nec w½ sec 123, E.T. Ry. sur, sp and sd. H. Giesecke et al's fee 1, c ne ne sec 121, J. Hughes sur, lcn. Melrose Oil Co.'s Mrs. L. P. Wood 1, Willett Holmes sur, No. 100, sd 2507 ft R. Wells et al's W. F. James 1, D. Diaz & N. Travis sur, sd 3010 ft.

SCHLEICHER COUNTY—M. D. Bryant et al's J. A. Whitten 1, lcn. J. M. Cooper et al's Bert Page 1, sec 40, blk "L," GH&SA Ry. sur, Ordovician lime test, elev 2270 ft, sd 5987 ft. W. C. Proctor, K. Kimberlin & J. D. Wesner's Judkins-Spencer (Pure) 1, c sw sec 4, Hooper-Wade sur, blk "A," cert No. 127, Ordovician lime test, sp and sd.

SCURRY COUNTY—H. H. Coffield & W. S. Guthrie's O. H. Holliday 1, sec 120, blk 97, H&TC Ry. sur, co at 2070 ft after shot, td 2967 ft. C. T. McLaughlin et al's W. C. Allen 1, c ne sec 398, blk 97, H&TC Ry. sur, sd 575 ft.

STERLING COUNTY—Darby Pet. Co.-J. I. Moore & Merry Bros. & Perini, Inc.'s R. L. Stansberry 1, c sw ne sec 20, blk 30, W&NW Ry. sur, dr 2220 ft.

STONEWALL COUNTY—Merry Bros. & Perini, Inc.-Humble O&R Co.'s C. L. Williams 1, sec 6, blk "C," AB&C sur, sd 3005 ft.

SUTTON COUNTY—Paul C. Teas et al's C. E. Mower 1, c ne sw sec 39, blk 5, TW&NG Ry. sur, Ordovician lime test, top lime 3268 ft, dr black shale 3615 ft.

TAYLOR COUNTY—H. Crissman et al's Abilene fee 1, sec 66, BAL sur, sd 1550 ft.

UPTON COUNTY—Baldridge Oil Co.'s S. Peck 1, sec sec 29, blk 41, T&P Ry. sur, T-4-S, mim. Gulf Prod. Co.'s J. T. McElroy 103, c nw sw sec 197, blk "F," Ordovician test, elev 2625 ft, top lime 2620 ft, dr lime and chert 11,320 ft. Humble O&R Co.'s L. W. Pollok-Gulf 1, c nw sec 4, blk "M," EL&RR sur, Ordovician lime test, dr salt 2330 ft. ...

WARD COUNTY—Rector Oil Co. et al's Lee Monroe 2, e cor sec 2, blk 1, W&NW Ry. sur, sd 1800 ft. Magnolia's Geo. Sealy 2, nwc sw¼ sec 43, blk "F," rig.

WINKLER COUNTY—Barnsdall Oil Co.'s Brown-Altman 1, sec nw¼ sec 6, blk B-5, PSL sur, dr 1040 ft. Fox-Butler & T. J. Jefferies et al's Brown-Altman 1, nec n½ sw sec 6, blk B-5, PSL sur, hfo, fsh tools 3200 ft. Green Production Co.'s J. T. Cross 1, nec nw¼ sec 4, blk B-10, PSL sur, lcn. Joe C. Maxwell & Atlantic O.P. Co.'s Oscar Clapp 1, swc n½ sec 37, blk 26, PSL sur, pb from hfw 3487 to 3365 ft for shot; L. Daugherty 2, se¼ sec 11, blk 26, mim. Magnolia Pet. Co.'s J. B. Walton 6, dr 600 ft. Mid-Continent Pet. Corp.'s J. F. Howe 2, nwc s½ nw sec 12, blk 26, PSL sur, testing lime pay 2750-2987 ft. Sid Richardson et al's M. J. Hill 1, swc se sec 18, blk B-11, PSL sur, elev 2755 ft, top salt 1055 ft, top lime 2255 ft, pb fr hfw at 3846 to 3200 ft and flowing 30 bbls oil daily after shot; J. B. Walton-Pure 1, sw¼ sec 1, blk B-3, PSL sur, elev 2940 ft, top anhydrite 1131 ft, dr 1710 ft. Sayre Oil Co.'s L. Daugherty-TP Coal 1, sec s½ se sec 2, blk B-26, PSL sur, making 10,000,000 ft gas, fsh 2735 ft. Siosi Oil Co.'s J. C. Lovett 1, nec sec 36, blk B-26, PSL sur, mim. Skelly Oil Co.'s J. M. Halley 2, ne¼ sec 25, blk B-11, PSL sur, elev 2726 ft, estimated 25,000,000 cu ft gas, fsh tools 3072 ft. Sun Oil Co.'s S. M. Halley 1, sec n½ sec 24, blk B-12, PSL sur, elev 2736 ft, dr 2490 ft. TP Coal & Oil Co.'s Lum Daugherty 1, sec n½ se¼ sec 2, blk 26, PSL sur, rig.

EAST TEXAS

ANDERSON COUNTY—Gulf Prod. Co.'s Mary J. Ross 1 (54.7-ac), Robt. Erwin sur, Camp Hill area, elev 484 ft, top Pecan chalk 3765-3970 ft, dr 4220 ft. Gulf & Humble's O. G. Rogers 1 (475-ac), Daniel Parker sur, 5 mi sw of Elkhart, rig. J. W. Luttes et al's C. M. McKee 1 (100-ac), Walter F. Pool sur, 3 mi se of Frankston, dk. Tide Water and Texas

Seaboard's N. N. Wills 21-A, Cayuga field Trinity test, cem 9⅝-in cas 4594 ft, dr 4750 ft. Joe A. Worsham et al's W. F. Wathen 1 (80-ac), B. Towels sur, nw of Cayuga field, mim.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (40-ac), Jessie Milam sur, elev 272 ft, so 65 to 95 ft, dr 1210 ft.

CASS COUNTY—A. D. King, Tr., and E. S. White's G. W. Allday 1 (40-ac), R. F. Whittaker sur, 4 mi ne of Linden, elev 288 ft, dk.

CHEROKEE COUNTY—Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw of Jacksonville, elev 433 ft, co 3505 ft. T. J. Wood & Young's New Birmingham Dev. Co. 3, Rusk pool, se offset to discovery well, Levi Jordan sur, mim. E. M. Thomason & Co.'s W. J. Addis 1 (80-ac), Jessie T. Jones sur, elev 471 ft, top pecan chalk 3951 ft, dr chalk 4225 ft.

FREESTONE COUNTY — Amerada Pet. Corp.'s H. Berk 1 (1057-ac), E. G. Rector sur, Cayuga area, elev 255 ft, Pecan chalk 2180-2405 ft, top Austin chalk 3175 ft, dr 3415 ft. F. A. Gillespie & Son's J. B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¾ mi n Fairfield, elev 453 ft, Pecan chalk 2648-2804 ft, Austin chalk 3610-3970 ft, top Woodbine 4351 ft, top sand 4398 to 4411 ft, tested sw dry and abd. J. A. Hoover and R. J. Bain's W. W. McFall 1 (65-ac), S. Garrison sur, lcn.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne of Longview, elev 426 ft, Pecan chalk 2391-2985 ft, top Austin 3447 ft, testing lime 3620 ft.

HENDERSON COUNTY—Great State Oil Corp.'s R. Sid Ausley 1-A, N. B. Thompson sur, elev 268 ft, sd 895 ft. Pioneer Exploration Co.'s Mrs. Anne Gentry 1, C. M. Walters sur, 3 mi w of Athens, elev 382 ft, Pecan chalk 2393-2556 ft, Austin chalk 3396-3804 ft, coring 4235 ft. Taubert & McKee (was Crosby & Culp's) M. T. Dodd 1 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, elev 376 ft, Pecan chalk 2390-2504 ft, Austin chalk 3456-3610 ft, tested sw 4049 ft.

HILL COUNTY—Humble's M. Holderman 1 (80.7-ac), C. Sullivant sur, 1 mi w of Mount Calm, deep test, rig.

HOPKINS COUNTY—D. A. Hale et al's L. N. Hall 1 (70-ac), A. Caro sur A-143, elev 506 ft, sd 1492 ft.

HUNT COUNTY—D. T. Cauble et al's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur A-1054, 3 mi se of Greenville, top Gober chalk 1400 ft, base Austin chalk 2088 ft, sd 2300 ft. Julian C. Hall et al's A. B. Parrish 1 (100-ac), (s) Nancy Danley sur, lcn. H. G. Samson and Shawver et al's J. R. Phillips 1 (53 1/3-ac), W. L. James sur, elev 522 ft, top Gober chalk 550 ft, top Austin chalk 1113 ft, sd 1300 ft.

KAUFMAN COUNTY—G. H. Germany et al's D. Clark-W. S. Kirby 1, S. Edens sur, sd 1728 ft. L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, 4 mi s of Terrell, elev 453 ft, top Austin chalk 1785 ft, dr 2940 ft. Murray and Emerson's G. W. Martin 1 (100-ac), W. F. C. Butler sur, 2 mi ne of Kemp, sp and sd.

LIMESTONE COUNTY—C. F. Carter et al's S. E. Dean 1 (75-ac), Pedro Varella sur, 3½ mi sw of Mexia, co with sg, td 1720 ft. David J. Crawford et al's Vol DeLong 1 (59.3-ac), Pedro Varella sur, 2½ mi n of Thelma, tested gas and sw, td 2807 ft. Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, top Nacatoch sand 834 ft, dr shale 2400 ft. J. Edward Mills et al's J. B. Hunt 1 (34¼-ac), Israel Woods sur, 3 mi ne of Kosse, Pecan chalk 2010-2137 ft, top Austin chalk 2985 ft, coring 3570 ft.

MORRIS COUNTY—C. M. "Dad" Joiner et al's Reese 1, T.C. Ry. sur, top Pecan chalk 2000 ft, sd 3540 ft. Watson et al's P. M. Staggers 1, J. D. Nelson sur, co 4259 ft. Maraydun O&G Co.'s T. C. Conner 1 (1000-ac), M. W. Mathews sur, dk.

NAVARRO COUNTY—W. J. Keeling Estate & Peyton Bros.' J. F. Rushing 1 (84-ac), Henry Ford sur, 6 mi w of Currie, elev 530 ft, Austin chalk 2155-2395 ft, top Woodbine 2858 ft, co 2880 ft. L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, sd 625 ft. Wm. C. McGlothlin et al's M. A. Dobbins 1 (138-ac), E. Lowry sur A-476 ft, 2 mi n of Corsicana, top soft Austin chalk 1244 ft and first hard chalk 1295 ft, sd 1298 ft. McGlothlin & McCarter's H. A. Barnett 1 (355-ac), Elisha Powers sur, se part of county, Pecan chalk 1900-2020 ft, top Gober chalk 2525 ft, Austin chalk 2815-3100 ft, dr 3165 ft. Wiggins et al's D. A. Donoho 1 (63½-ac), John Cauple sur, 2 mi sw of Corsicana, dr 420 ft.

RED RIVER COUNTY—J. S. Abercrombie & Harrison Oil Co.'s J. M. Roberts 1, John Ware sur, 8 mi n of Clarksville, elev 424 ft, dry and abd in dry sand 2065-75 ft. J. E. Dinger Oil Co.'s W. T. Norris 1 (351-ac), Joseph Guest sur, 1 mi se of Detroit, dr 950 ft.

ROBERTSON COUNTY — H. L. Patton Co.'s W. H. & H. A. Ely 1 (616-ac), Antonio Manchaco sur, 5 mi se of Hearne, rig. Steen Drl. Co.-Dr. W. M. Manness' H. A. Sackville 1 (2025-ac), J. M. Viesca sur, dry and abd in shale 5340 ft.

RUSK COUNTY—Clark et al's J. T. Irwin-Hapgood 1, Geo. May sur, 5 mi ne of New Salem, lcn. Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e of Pirtle, elev 370 ft, Pecan chalk 2418-2793 ft, Austin chalk 3352-3512 ft, dr 3695 ft.

SMITH COUNTY—W. L. Cloud and A. G. Deck's Dora Kendall 1, John Williams sur, 3 mi e of Van field, co 1270 ft. Dr. Garland et al's J. W. Bartlett 1, R. G. Stewart sur A-955, 1 mi se Jamestown, sp. W. R. Harrison et al's (was R. W. Fair) W. P. Rushing 1, Jacob Herrin sur, 1½ mi se Whitehouse, elev 393 ft, pb from 4673 to 4330 ft and cem 5½-in csg 4295 ft.

TITUS COUNTY—Steve Rotunda et al's O. C. Lillianstern 1, W. H. Crawford sur, 5 mi se of Talco, dk.

UPSHUR COUNTY—G. W. Berry et al's D. M. Hollins 1, B. Asher sur, lcn. Russell Tarr et al's J. C. Hall 1 (180-ac), Wm. McFadden sur, 1½ mi nw Kelsey, lcn.

VAN ZANDT COUNTY—J. C. Acree et al's F. W. Anderson 1 (160-ac), John Blair sur, 4 mi n of Wills Point, sd 2065 ft. J. Beren et al's J. R. Bryant 1 (54.44-ac), NCSL sur, sd 1325 ft; Palmer 2, sd 1080 ft. Roy I. Carter & Jennings' S. McGee 4 (43.4-ac), blk 20, Wm. Daniel sur, elev 441 ft, sd 1268 ft. A. J. Delcambre et al's A. Crim 2 (48-ac), sd 1370 ft. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), blk 14, NCSL sur, sd 1188 ft. S. L. Olson, Tr., and Jensen-Olson Oil Co.'s J. D. Listenbee 2 (46-ac), Wm. Daniel sur, lcn. Rauch Bros.' (Weltex Oil Corp.) Bearden-Palmer 1 (61.1-ac), blk 11, NCSL sur, sd 1237 ft. J. K. Wadley et al's W. J. Carnes 1, T.P. Ry. sur A-283, elev 353 ft, Pecan chalk 2432-2648 ft, Austin chalk 3721-4090 ft, top Woodbine 4630 ft, sw sand 4748-4755 ft, dry and abd. Wise & Jackson's (Florence Oil Co.) Sanger Inv. Co. 1, (50-ac), J. Walling sur, fsh 3040 ft; Sanger 2, swabbing and flowing 50 bbls oil per hour 2855-2925 ft.

WOOD COUNTY—R. M. Coleman et al's J. J. Junior 1 (59-ac), Jas. M. Moore sur, 7 mi sw Winnsboro, lcn.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Bergendall, Carroll et al's Buchanan 1, W. M. McIlvain sur, elev 353 ft, 5 3/16-in csg 3676 ft, swabbed claimed so, ran liner, failed to flow, arr deepen, td 3682 ft. Harralson & Ault's Alma Bell 1, (35-ac), Wm. Patton sur, dk. Cohen & Hunter's W. T. Lovelace 1 (96-ac), W. M. McIlvain sur, lcn. Steve Rowell 1, (58-ac), W. M. McIlvain sur, lcn. Hammonds & Williams' W. T. Cook 1, J. N. Sorrell sur, Pecan Gap 1830-2371 ft, cemted csg 2516 ft, dr plug, fsg tubing, td 2531 ft (Ozan.)

MARION COUNTY—Ed S. Holman's Henderson A-1, R. Bennington sur, dr 2715 ft W. H. Oberthier's East Texas Ore & Dev. Co. 1, Walter H. Gilbert sur, sd 3670 ft.

PANOLA COUNTY—Geo. Le Grand's P. J. Laidleigh 1, A. Thompson sur, spd 10-in csg 60 ft. S. B. Wallace 1, A. M. McLaughlin sur, rur. Neel & Nixon's Rushing 1, Mary Smith sur, spd dr 500 ft. G. F. Hudson's J. F. Nail 1, C. McCrary sur, spd 8-in csg 50 ft.

SABINE COUNTY—Ed C. Smith's Hamilton 1, Jno. Haley sur, rur.

SHELBY COUNTY—L. M. Bradley et al's J. J. Ashberry 2, J. M. Mitchell sur, top Pecan Gap 2045 ft, dr Pecan Gap 2210 ft. O. P. Bush, Tr.'s Pickering Lbr. Co. 1, W. H. Harvey sur, sd 990 ft, shale. Cliff Stovall's Pickering Lbr. Co. 1, G. H. Patterson sur, claim sand with so 1512-20 ft, arr ds test td 1520 ft. Nacatosh sand.

SOUTH TEXAS

BANDERA COUNTY — Plateau Oil Co.'s R. G. Garrison 1, GC&SF sur, sec 506, dr 1825 ft.

BASTROP COUNTY—All wells sd.

BEE COUNTY—Conservative Oil Co.'s R. C. Harris 1, 2310 ft el, 330 ft nl J. L. Dugat sur, outpost well Dirks pool, ru. Diamond Half Oil Co.'s McKinney 1, commence north cor of fence, thence 2740 ft se, thence 330 ft sw at rt/a in Spencer Morris sur, 1 mi ne W. Tuleta field, sp. Dirks Bros.' (Earl Calloway et al), M. H. Milster 1, C. B. Shain sur, Ab 305, Hockleyensis sand 2595-2610 ft, Pettus sand 3342-50 ft, both dry, dd. Haines-McMillin Oil Corp.'s Stoltzfus 1, sec 14, Ragley sub, Uranga gr, ru. Humble O&R Co.'s Thompson 2, Garret Roche sur, sandy shale 3984-4008 ft, oil and gas odor, making dst. Mid-Tex Pet. Co.'s Travland 1, J. M. Uranga gr, Hockleyensis sand 3728-32, rather shaley, but carried good odor, now dr 4025 ft. Neversuch Oil Co.'s Mrs. Rosa Borroum 1, Chas. Baker sur, dr 1750 ft. George Pace et al's Goree 1, Tarver-Henslee sub. blk 36, T. B. Barton sur, dr 1000 ft. A. P. Peirce, Jr., et al's Sinclair et al 1, J. M. Uranga gr, dk and sd. Worth Oil Co.'s Rutledge 1-A, B. Q. Hadley sur, dr 1200 ft. Wrightsman Oil Co.'s A. J. Kimball 1, S. Winship sur, ru.

BEXAR COUNTY—C. A. Campbell et al's Margaret Cantu 1, J. M. Arocha gr, sand 1467½-71 ft, set csg, wocs. George O'Neill et al's Holly Crouch 1, M. Gotari sur No. 5, sec 4, td 1395 ft, r from 900 to 1365 ft, show o&g. Richcul Oil Co.'s Kohler 1, J. M. Baerrera sur, sd 1370 ft, move off rotary, prep to move in spudder to dd; Karl Weilbacher 1, S. Jett sur No. 53, sd 660 ft.

CALDWELL COUNTY—Reedy et al's T. North 1, A .Floyd sur, td 2275 ft, no rept. R. Y. Walker's J. M. Pierce 1-B, S. Seal sur, td 2539 ft, cement failed to hold, recement and prep to test again.

CALHOUN COUNTY — Steinberger Pet. Corp.'s Shofner 1, A. Esparza sur, dr 2250 ft.

DE WITT COUNTY—S. S. Price et al's W. Buehrig 1, 330 ft nl and el sec 7, T&NO sur, lcn.

DUVAL COUNTY—J. M. Anderson's Philp 1 (was Stieren Oil Corp.'s Philp 2), sur 320, dr 850 ft. Mills Bennett's W. R. Peters 1, sec 178, dr 2150 ft. Conway & Buescher's A. H. Hoffman 2, 330 ft s and 330 ft e of sw cor of sec 120, but in sec 116, lcn. Frank Gravis' C. W. Hahl 1, sec 64, sd 23 ft to dr water well. Harvey & Henderson's Cherniskey 1, 330 ft sl, 660 ft wl sur 226, 3 mi w Labbe Gas field, lcn. Humble O&R Co.'s Ruiz Est. 2, sec 553, dr 2566 ft. Intrepid Oil Co.'s Parr Ranch 1, sec 26, sd 4856 ft for orders. Magnolia Pet. Co.'s C. W. Hahl 1, sec 67, dr 2310 ft. W. L. Pearson et al's Fitzsimmons 1, sec 291, coring 4550 ft.

FRIO COUNTY — Shoemaker et al's M. Roach Est. 1, C. Wentzel sur No. 139, sand 2365-71 ft, wait on csg.

GILLESPIE COUNTY—One well sd.

GONZALES COUNTY—Southwestern Dev. Synd., Ltd.'s W. S. Atkinson 1, S. Y. Reims sur, dr 900 ft, gas show 704 ft, 10 in csg set 86 ft.

GUADALUPE COUNTY — Grayburg Oil Co.'s McKean 13, Cottle sur, td 1749 ft, pulled 6⅝ in csg, reset 1948 ft, re-dr. A. D. Locke's Mrs. N. S. Lowman 1, C. Campbell league, dr 700 ft. Siedemann's Fee 2, Esnaurrizar sur, dr 385 ft.

HIDALGO COUNTY—D. D. Oil Co.'s (was W. L. Cleary et al) Brock & Showers 1, lot 8, blk 9, Vista Hermosa sub por 80, td 3058 ft, pb 2980 ft, fsh for whipstock, dst 3044-56 ft, 10 ft mud 26 min., cored to 3058 ft, last 2 ft shale. D. M. C. Oil Co.'s Daskam 1, blk 43, por 45, dr 2875 ft. King-Woods Oil Co.'s W. M. Doughty 1, sh 90, San Salvador del Tule gr, coring 5695 ft. Nutex Oil Co.'s Frank Rabb 1, Laguna Sesa League, td 125 ft, sp with spudder, rur prep to re-dr. E. A. Showers et al's Brock & Showers 1, lot 11, blk 18, por 79, dr 980 ft, set 208 ft 10 in csg. Union Sulphur

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Co.'s Am. Rio Grande Land & Irr. Co. 3, lot 2082, blk 86, N. Capisallo dist., Llano Grande gr, dr 5725 ft.

JIM HOGG COUNTY—Magnolia Pet. Co.'s Martinez 36-A, sec 275, coring 2684 ft. Miller et al's Yeager 1, blk 6, sur 20, dr 1685 ft. Sun Oil Co.'s Elizabeth East 1, blk 126, Santa Domingo gr, dr 2656 ft, sw sand 2563-90 ft.

JIM WELLS COUNTY—O. W. Killam's W. D. Wade 4, S. A. Agua Dulce sur, blk D, td 4028 ft, reset liner, well flowed oil, now sw, but had little pressure, to pull liner and dd. Joe Lundin's T. C. Hewitt 1, sec 51, Haldeman sur, prep to sp. Magnolia Pet. Co.'s Seeligson 6, Canale sur No. 218, dr 1700 ft. Smith & Storey's Schaeffer 1, S. Bigham sur, sp. Sinclair Prairie O&G Co.'s A. A. Seeligson 1-A, sec 71, SK&K sur No. 215, td 3900 ft, pb.

KARNES COUNTY—Herman Brown's Edmonia Timberg 1, 330 ft nel and midway between nwl and sel 177-ac tr, James Johnson sur, sw Burnell field, approx lcn, mim. Luling O&G Co.'s W. C. Boyce 1, w cor Boyce tr, s Burnell field, making lcn. R. G. Tonkin et al's Miss Olive Henke 1, Seguin Grant, td 2810 ft, pb 2200 ft, try to run csg, but two attempts failed, ream with rock bit, now running csg again.

KERR COUNTY—Jeff Love & Eastland Oil Co.'s Jeff Love 5-E, sec 1594, J. Martinez sur, dr 3650 ft. Meteor Oil Co.'s C. O. Whitworth 1, sec 1439, HE&WT sur, dr 985 ft.

LEE COUNTY — James Pederson's C. A. Turner 1, D. Hudson sur, td 6560 ft, pb 5300 ft, co to test.

LIVE OAK COUNTY—Baugh & McMillan's Walton & Campbell 1, D. R. Fant sur, dr 2685 ft. Brunson et al's Nichols 1, Ayers sur, dr 1350 ft. The California Co.'s G. Blankenship 1, A. A. Dunn sur, sec 508, dr 3120 ft. Henderson Coquat's H. E. Rex 1, GH&H sur, No. 1, ab 197, set sur csg, sd. Lion Oil Ref. Co.'s McNeill 4, Jane Curry sur, ru. Smith & Storey's Frederick 1, Jane Curry sur, dr 3000 ft.

MAVERICK COUNTY—One well sd.

McMULLEN COUNTY—Howard & Claunch's Claunch 3, M. Hely sur, sd 365 ft; Claunch 4, M. Hely sur, dr 765 ft. Points et al's W. Fahler 1, Pittuck sur, dr below 600 ft. Hy Williams' W. L. Cox 8, James Garner sur, dr 935 ft. Witherpsoon Oil Co.'s H. L. Lark 1, blk 110, Lark sub, E. W. B. Scrugham sur, dr 600 ft.

MILAM COUNTY — C. F. Drake et al's Standard Coal Co. 1, G. L. Johnson sur, prep to dd from 1569 ft. Montchrist et al's F. Dymke 1, 2345 ft nel, 1746 ft swl W. Allen sur, dr 415 ft. Second National Oil Co.'s B. P. Ward 2, 2598 ft swl, 700 ft sel 321-ac tr, L. Taylor sur, prep to sp.

NUECES COUNTY—Magnolia Pet. Co.'s S. Page 1, Kinney sur No. 586, sec 8, dr 4565 ft. United Prod. Co.'s M. L. Rivers 2, Chapman Partition, sd 4795 ft.

REFUGIO COUNTY—Magnolia Pet. Co.'s Mattie Wood 1, 330 ft sl and wl of S. Turner sur, 7 mi w Refugio, lcn. Quintana Pet. Co.'s Tom O'Connor 2-B, M. L. White sur, coring 8713 ft, in Vicksburg.

SAN PATRICIO COUNTY — Heep Oil Corp.'s Welder 1-B, Portillo sur, dr 5615 ft, made small well 5449-55 ft (corrected sand record), but gas pressure was too low. Humble O&R Co.'s Welder 1, lot 4, A&O sub, Villareal gr, dr 5465 ft. Plymouth Oil Co.'s E. H. Welder 2-B, M. Musquiz sur, td 6854 ft, pb 5100 ft to sdtr, hole caving, trying to get to bottom; Welder 1-C, 2000 ft nl and el sec 49, resub of Welder ranch, 3 mi se Aransas gas field, contract for new test. Stanolind O&G Co.'s J. J. McMillan 1, lot 12, Fulton Pasture sub, P. Fitzsimmons sur, fsh 4018 ft.

STARR COUNTY—C. R. Borah et al's A. Guerra 1, share 6, San Jose gr, dr 2705 ft. John H. Clopton's Roos et al 1, Por. 92, sd 4334 ft for fsh tools; D. L. Tijernia 1, share 14-C, blk 14, por 80, dr 600 ft. Conroe Drlg. Co.'s Guerra 1, blk 35, J. N. Crawford sub, por 56, fsh 2210 ft. Conway & Emanuel's SCCC 1, blk 57, JL sub, por 89, coring 2735 ft. Crawford et al's Hicks & Phelps 1, Pedernal gr, sd 1615 ft. Goodwin et al's N. Pena 1, sh 80, por 81, dr 780 ft. Lester & Duffield & Vice et al's E. B. Carruth et al 1, share 1-B, por 91-92, td 4016 ft, pb and dr 2861 ft in sdtr hole. Merren, Johnson & Bond's SCCC 4, blk 24, JL sub, por 89, coring 2693 ft. Sunray Oil Co.'s S. Sanchez & Bro. 1, sec 344, sd 4015 ft, contract depth. E. B. VanHuss' Garcia Land & Cattle Co. 1, por 100, dst failed 2768 ft when seat gave away, prep new dst.

TRAVIS COUNTY—All wells shut down.

VICTORIA COUNTY—Humble O&R Co.'s Mrs. M. M. Marberry 1, making lcn 3 mi s McFaddin townsite on 93-ac tr, Moore & Ahern's Henderson & Pickering 1, 5280 ft nwl, 330 ft nel W. Rupley sur, 1½ mi ne Placedo, mim.

WEBB COUNTY—Foster Barnsley's Webster 6, ne sw sec 685, pull tubing and liner to dd from 3050 ft. Carolina-Texas O&G Trust's Benavides 11, ne sec 683, sd 3360 ft. O. W. Killam's A. M. Bruni 1-A, blk 55, Albercas gr, dr 2235 ft. Frank McMillin's A. M. Bruni Est. sec 77, ru. Payne et al's Hoggterp 1, blk 5, sec 1110, dr 650 ft, last rept.

WILLACY COUNTY — South Texas Dev. Co.'s F. Armendiez 1, share 4, dr 2860 ft.

WILLIAMSON COUNTY—All wells shut down.

ZAPATA COUNTY—Danvers & Harrison's N. J. Vela 1, blk 7, Vela sub, por 29, fsh 2256 ft. O. W. Killam's A. M. Bruni 2, Borrocito Pasture, J. V. Borrego gr, dr 1800 ft. Nordan & Morris' C. Vela 1, blk 6, Replat por 20, dr 2010 ft. Joe Palmer's J. M. G. Martinez 1, blk 27, sec 434, dr 1250 ft. Venture Pet. Co.'s I. Ramirez 1, blk 1, Re-plat por 18, dr 2100 ft.

TEXAS GULF COAST

ANGELINA COUNTY—Lee Tex Oil Co.'s A. H. Geisler 1, mile nw of Lay, B. J. Thompson sur, dk. Koch & Duffey's L. W. Alberry 1, near Diboll, J. A. Prado sur, sd 2050 ft. E. B. La Rue's W. D. Ivey 1, near Huntington, Scarbrough sur, sd 1464 ft.

BRAZORIA COUNTY—Amerada Pet. Corp.'s Houston Farms Dev. Co. 1, s of Liverpool, L. G. Bachelder sur, cleaning hole, td 7663 ft. Big Creek Oil Co.'s F. Truska B-1, s of Alvin, H&TC sur No. 7, dr shale 5620 ft. Luling Oil & Gas Co.'s M. J. Jamison Est. 1, 4 mi w of Angleton, C. Smith sur, abd 4535 ft.

CHAMBERS COUNTY—Humble's A. Middleton 1, 6 mi e of Anahuac, H&TC sur, sec 58, dr plugs 7050 ft. South Gulf Oil Corp.'s R. M. White 1, ne of Turtle Bay, Luke Bryan sur, lcn. Sun Oil Co.'s Hamilton 1, sw of Seabreeze, T&NO sur, sec 128, dr shale 8764 ft.

FORT BEND COUNTY—Turnbull & Irwin's Hermann Hospital 1, e of Richmond, J. S. Cartwright sur, woc 900 ft.

HARDIN COUNTY—Jack Frazier's Sternenburg 1, nw of Kountz, J. Pearson sur, lcn.

HARRIS COUNTY—Red Bluff Oil Co.'s Seureau 1, w of Red Bluff, Wm. R. Harris sur, sd 6029 ft. Cockburn & Frazier's Hermann Hospital 1, e of Addicks, Wm. Hardin sur, dr shale 5624 ft. Hill & Hill's C. R. Wharton 1, w of Fairbanks, W. C. R. R. sur, sec 5, dr shale 1485 ft. W. U. Paul's House 2, 100 ft n of House 1, M. Magruda sur, dr shale 4682 ft. T. S. & F. Oil Co.'s J. B. Hines 1, sw of Lynchburg, A. McCormich sur, dr shale 3300 ft.

JASPER COUNTY — Republic Prod. Co.'s Sabine Tram Co. 1, ne of Buna, H&TC sur, sec 71, dr shale 834 ft.

JEFFERSON COUNTY—Sun Oil Co.'s Long 1, sw of Nome, J. Blair sur, lost drill collar in hole, pb to 8640 ft from 8820 ft.

LIBERTY COUNTY—Extension Oil Co.'s J. A. Lovett 1, sw of Hull, P. P. Devers sur, sd 4049 ft. Liberty Independent Oil Co.'s J. M. Neal 1, se of Davis Hill, S. Strong sur, dr shale 3751 ft.

MADISON COUNTY — Madisonville Prod. Co.'s D. C. Cannon 1, nw of Madisonville, J. P. Phillips sur, dk.

MATAGORDA COUNTY — Cockburn Oil Corp.'s Hawkins 6, Sheppards Mott, D. McCarthy sur, twisted off drill pipe around 1300 ft, td 5803 ft. H. M. Smith's Wadsworth Est.

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1, Mad Island prospect, S. R. Fisher sur, lot 3, B-5, dr shale 4306 ft.

POLK COUNTY—West Prod. Co.'s W. T. Carter 1, se of Livingston, S. Hiroms sur, dr shale 5080 ft.

WALKER COUNTY—Boone Brother's Tex. L. L. L. Co. 1-C, se of Kittrell field, M. Milsap sur, no report. Dan F. Cameron's Mrs. Eva Gohlman 1, near Riverside, J. J. Porter sur, lcn.

WALLER COUNTY—Smith et al's J. R. Garrett 1, e of Millheim, S. M. Williams sur, no report.

WHARTON COUNT Y —John Deering's Kountz 1, se of Louise, S. A. & M. G. R. R. sur, dr sand 4765 ft. The Texas Co.'s Pierce Est. 1, se of Pierce, I&GN sur, dr shale 2565 ft.

LOUISIANA GULF COAST

ACADIA PARISH—Humble's Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr sand 8453 ft. Woodley Pet. Co.'s Dr. Newman 1, Churchpoint, sec 24-7s-1e, sdtr 4930 ft

AVOYELLES PARISH—Southern Star Pet. Co.'s I. G. Boyette 1, sec 28-3n-5e, dr shale 3015 ft.

CALCASIEU PARISH—Nichols McCaleb's Gray 1, 3 mi nw of Starks, sec 22-8s-13w, ru. Gulf's Stark 1, s of Vinton, sec 26-11s-12w, sec 28-9s-7w, sd 8250 ft.

CAMERON PARISH—The Texas Co.'s Jessen 1, s of Calcasieu Lake, sec 24-14s-10w, dr shale 7680 ft.

JEFFERSON PARISH — The Texas Co.'s Bayou St. Denis 1, se of Lafitte, sec 19-7s-24e, in oil sand 5788 ft.

JEFFERSON DAVIS PARISH—Strake Oil Co.'s Calcasieu National Bank 1, sw of Woodlawn, sec 12-9s-6w, sdtr 7830 ft.

PLAQUEMINES PARISH—Southern Sulphur Co.'s State Bay Adams 1, sec 23-20s-28e, dr gumbo 1398 ft.

NORTH LOUISIANA

BIENVILLE PARISH—Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, dr 2870 ft with reported sg.

BOSSIER PARISH—Clyde French's G. Hall 1, 28-20n-13w, dr 800 ft. Howard & Scott's Sherrill 1, nw sw 13-18n-12w, rur. W. A. Kirklin, Tr.'s Garrett & McKellar 1, se nw nw 3-21n-13w, dr 205 ft. L. R. Skidmore's Davis 1, se se 12-18n-13w, sd 1150 ft.

CADDO PARISH—Ed Bailey et al's Hartzo 1, ne nw 28-22n-15w, spd cemted 12½ in csg 90 ft. W. T. Bell's Bostick 1, sw sw 12-22n-16w, fsg bailer, td 2750 ft. California-Louisiana Dev. Co.'s W. E. Glassell 1, sw sw 29-20n-14w, 10-in csg 40 ft. Texas Trading Co.'s A. T. Curry 1, sw nw 28-19n-16w, tested est 1½ mil ft gas ds test 940-52 ft, set tub with pckr at 940 ft, td 952 ft.

CATAHOULA PARISH—Phillipi et al's La. Cent. Lbr. Co. 1, nw se 2-9n-6e, rur to pb for shallow gas test, td 3016 ft.

CLAIBORNE PARISH—K. C. Bundy's J. K. King 1, 12-21n-7w, dk. J. C. King et al's Odis Webb 1, nw ne 21-21n-8w, dr 1430 ft Midway shale. E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, dk and rog.

DE SOTO PARISH—Century Oil & Drilling Co.'s J. M. Norton 1, sw se 27-11n-14w, elev 244 ft, cemtd 6⅝ csg 2810 ft after gas blowout at 2825 ft, dr plug tested est 4 mil ft gas and show sw, sd 2825 ft. Dempsey & Manziel's Thigpen 1, ne sw ne 33-13n-13w, pumping oil & water, wo gauge, td 1745 ft chalk. P. G. Frailey et al's J. E. Stell 1, 5-12n-16w, dk. Hester et al's Alston 1-A, ne sw 11-11n-16w, wocs 10-in csg 42 ft. Ramsey DeSoto Oil Co.'s J. W. Ramsey 1, se nw 36-11n-11w, sd 210 ft. E. L. Foster et al's Youngblood 1, ne ne 9-11n-14w, dr 1840 ft. J. T. McCormick et al's Harris 1, sw se 11-12n-14w, mim. G. O. Collins' J. H. Riggs 1, ne sw 21-14n-13w, mim.

EAST CARROLL PARISH—Century Oil & Drilling Corp.'s Olivedell Pltg. Co. 1, 56-21n-12e, sd 170 ft.

NATCHITOCHES PARISH—Clyde Creighton's Friedman Est. 1, swc 52-7n-6w, dr 2770 ft. Edwards & Turner's Prudential Life Ins. Co. 1, nw nw 26-10n-6w, dk. Roy Raines et al's Fee 1, sw sw 28-9n-10w, fsg ds, td 3660 ft. Leslie Prod. Co.'s Tom Moffitt 1, se nw 19-10n-10w, lcn. B. E. Taylor's De Blieux 1, 83-10n-7w, dk.

RAPIDES PARISH—S. J. Taylor's Bentley Lbr. Co. 1, 40-5n-1w, elev 108 ft, base Jackson 2175 ft, base Minden 3040 ft, dr 3582 ft shale.

SABINE PARISH—M. T. Hines' J. B. Hill 1, sw ne 4-6n-11w, rur. Lawson, Leavell & Bryant's Whitmey Corp. 1, 5-9n-13w, dr 2860 ft. Whitehurst et al's Logan Oil Co. 1, 3-9n-13w, cemtd 6-in csg 1460 ft, top Nacatosh.

ARKANSAS

ARKANSAS COUNTY—Grand Prairie Dev. Co.'s Fischer 1, nw ne nw 6-6s-4e, sd 2900 ft.

ASHLEY COUNTY—J. D. Houseman et al's Bovine Farms 1, ne ne 1-18-8w, rur.

HOT SPRINGS COUNTY—R. E. Morris' Morris & Lang 1, sw sw 19-6s-17w, sd 512 ft. lime.

LA FAYETTE COUNTY—W. H. Harvey's A. M. Allen 2, se sw 18-19-24, sd for fuel 1500 ft; R. F. Allen 1, ne se sw 13-19-25, dk. S. H. Riggs et al's Jas. Dubose 1, se nw 35-15-24, 10-in csg 100 ft, dr 975 ft. Kamon & Neely's Red River Lbr. Co. 1, sw sw 26-19-25, dr 2160 ft.

MILLER COUNTY—King Oil Corp.'s E. G. Anderson 1, nw sw ne 16-14-27, 10-in csg 89 ft, dr 1615 ft; C. H. Schroder 1, sw ne 24-14-28, sd 3160 ft. C. V. Lenz's Dale 6, sw se nw 24-15-26, rur. Lee Timberlake's Frost Est. 1, sw sw se 27-15-26, dr 2480 ft.

OUACHITA COUNTY—S. J. Carnes' L. Caldwell 1, nw nw 12-14-19, sd 100 ft. P. Highsmith 1, nw ne nw, spd and sd. Kraft Oil Corp.'s Rath & Cartier 1, sw sw sw 32-13-17, 6-in csg 1420 ft, tested sw, sd, td 1428 ft. J. D. Reynolds' Bragg 1, sw ne se 25-13-18, 6-in csg cemtd 1372 ft, td 1390 ft. T. J. Gaughan et al's J. Humphrey 1, swc ne ne 30-13-17, rur. J. B. Street, Tr.'s J. M. Ashworth 1, swc nw nw 19-13-17, lcn abn.

UNION COUNTY—Gulf Ref. Co.'s Werner Lbr. Co. 49, sw nw sw 5-16-16, setting surf csg (8000 ft test). Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, wosr, td 2758 ft. Geo. L. Pace's Union Sawmill Co. 1, ne ne sw 24-18-12, top Arkadelphia 2025 ft, dr 3000 ft. E. O. Olds' Telford 1, nw sw 35-17-15, arr set 6⅝ in csg 2180 ft, td 2200 ft. Joe Modisett et al's D. G. Sturdivant 1, se se 6-18-13, wocs 12½ in csg 190 ft (5000 ft test); Ward 1, se nw 6-18-13, wocs 12½ in csg 150 ft. H. L. Hunt, Inc.'s E. F. Gregory 15, 10-17-14, dr 5070 ft. Reuter Oil Co., Inc.'s Kinard 1, nw se nw 32-18-14, sd repr pumping unit, td 2189 ft; Vines 2, nw sw se 29-18-14, wosr 2216 ft.

MISSISSIPPI

ISSAQUENA COUNTY—Pelican Oil & Gasoline Co.'s Martin G. Bender 1, nw nw 11-12n-8w, elev 105 ft, 7-in csg at top of gas rock 3079 ft, sd cur titles and adding to block, td 3227 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Fox 1, se se sw 30-7n-12w, rur.

MONROE COUNTY—P. J. McAlpine et al's Crook 1, ne ne 4-13s-18w, elev 413.6 ft, sr td 1807 ft.

MONTGOMERY COUNTY—D. C. Shaffer et al's Fee not given, 31-19-7w, lcn.

STONE COUNTY—Gulf Ref. Co.'s Dantzler Lbr. Co. 7, 36-3s-11w, lcn.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 2, nw nw 14-14n-1e, cemtd 6⅝-in csg 820 ft, arr core ahead, shale.

WINSTON COUNTY—Jack Vale's Moody 1, nw sw 3-13n-14e, elev 540 ft, dr 954 ft, Midway black shale.

ALABAMA

BALDWIN COUNTY—Danciger O&R Co.'s U. S. Government 1, nw nw 1-9s-1e, (parcel 2, Ft. Morgan Reservation, 536-ac), 12½-in csg 200 ft, dr 1535 ft, sand.

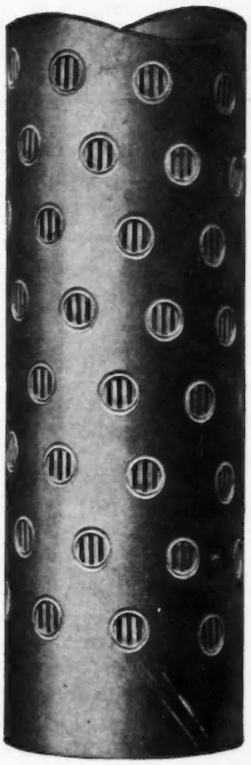
COVINGTON COUNTY — Geometer Prod. Corp.'s A. B. Culbreth 1, sw sw ne 8-2n-14e, dr 3600 ft, Selma chalk.

PIKE COUNTY—Alabama Drlg. Co.'s Faulk 1, nw nw 31-11n-21e, ru and sd.

FLORIDA

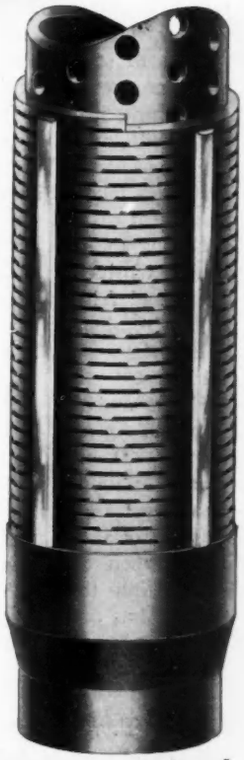
LAKE COUNTY—Oil Dev. Co. of Fla's Gulf Exploration Co. 1, se se 17-24s-25e, spd.

McEVOY



RELIABLE STRAINERS

McEVOY IMPROVED WIRELESS WELL STRAINER for Side-tracking and Work-over jobs.



McEVOY PREFORMED WIRE STRAINER ... wire hugs the pipe.

Established 1906
J.H. McEVOY & CO.
Texas Ave. at Milby St.
HOUSTON, TEXAS

Specify McEvoy Blowout Preventers . . . McEvoy Casing and Tubing Heads . . . McEvoy Complete Assembled and Tested Christmas Trees . . . McEvoy Liner Packers and Setting Tools, etc.

NEWS *from the* *Industry's* EQUIPMENT MAKERS

E. S. Dickey Appointed Exclusive Representative American Meter

American Meter Company has announced the appointment of E. S. Dickey to the position of executive representative. He will maintain his present address at the Maryland Meter Works office, 309 East Saratoga Street, Baltimore, Maryland.

Mr. Dickey was born in Baltimore April 18, 1873, and first entered the meter business in 1889 as an apprentice with Dickey, Tansley & Company, predecessor of Maryland Meter Works. Prom 1891 to 1896 he broadened his experience by working one year with Pennsylvania Railroad Company and for four years with Metropolitan Life Insurance Company.

When, upon his father's retirement from active business, April, 1896, Maryland Meter Works was merged with American Meter Company, he again entered the employ of that factory with various duties, both secretarial and in the field. Along with this employment he took extensive courses of study in mechanical and electrical engineering until, in 1899, he became works manager in charge of production and in 1911 general manager of Maryland Meter Works.

He has taken a leading part in the development of new type meters.

During the past 35 years he has traveled extensively, making many acquaintances and friends among operating officials of various gas companies as well as among the associated gas appliance manufacturers.

He became a member of the old American Gas Association at the Denver meeting in 1900, being active in the work of that association as well as in the American Gas Institute, the National Commercial Gas Association and subsequently since 1919, when these organizations were merged into the A. G. A. From time to time he has presented various papers and addresses, and has served in various official capacities.

Dewey T. Ross, Inc., Opens Houston Office

On February 1, Dewey T. Ross, Inc., opened an office at 929 Shell Building, Houston. The new office is in charge of Carl Hickman.

The company maintains headquarters in Tyler and a branch office at Longview. The concern, which specializes in oil field engineering, construction, installation and

CARL HICKMAN

consulting work, now is three years old. The Tyler office is in charge of Dewey T. Ross, and the Longview office under the supervision of H. P. Ross. The engineering department is headed by Joe Satterfield and Virgil Fleming. H. D. (Red) Shumate is rig building foreman. The company has a permanent staff of eight, and several crews of workmen.

Ohio Forge & Machine Reopens Chicago Office

Ohio Forge and Machine Corporation, Cleveland, Ohio, successors to Gears & Forgings, Inc., manufacturers of gears, speed reducers, forgings and special machinery, announce the appointment of The Denton and Anderson Company, 1225 West Washington Blvd., Chicago, as its representatives in the Chicago territory.

Associated with Geo. E. King in this office are Clyde G. Bassler, C. A. Gould and John R. Poyser.

Well Equipment Corporation Adds Two New Lines

Well Equipment Corporation, 2023 Semmes Street, Houston, has been appointed territorial distributors for Badgett Steam Lubricator Corporation of Chickasha, Oklahoma, to sell Badgett chemical lubricators, firing controls for boilers, automatic stack blower controls, water regulators and gas burners.

This sales organization has also been appointed as agents in Texas and Louisiana for the Exner-Dodge Packer Company of Coffeyville, Kansas, representing seamless and lapweld bull plugs and swedge nipples, casing nipples and packers.

C. K. Stillwagon, president Well Equipment Corporation, returned to Houston late in February from a Kansas-Oklahoma trip, where arrangements for these sales connections were completed, and announces the appointment of F. E. Logan as an addition to the Gulf Coast sales force.

Ray P. Tarbell Joins Ideal Electric & Manufacturing

Ray P. Tarbell recently was appointed manager of the welding division of The Ideal Electric & Manufacturing Company of Mansfield, Ohio.

Mr. Tarbell has been in the welding industry and its development since 1918. This includes 13 years with Lincoln Electric Company as sales engineer and district manager, two years with Robt. E. Kinkead, Inc., consulting welding engineers, and two years as manager of welding electrode division of Babcock & Wilcox Company.

W. G. Sanders Joins Oil City Brass Works

Oil City Brass Works, Beaumont, Texas, announces appointment of W. G. Sanders, effective March 1, in line with the present program of manufacturing and distributing its own line of oil country specialties. This company was recently licensed to make the Appleman patented gumbo bit.

Sanders helped to pioneer the Appleman bit while with Gulf Coast Ma-

W. G. SANDERS

chine & Supply Company in 1928-30, and among his duties in the new connection will be the sale of forged Appleman bits through oil field shops and supply companies. He has been connected with the oil tool business since the early days of Spindle Top, working for National Supply Company, Republic Supply Company and T. T. Word Supply Company. He served Rycade Oil Corporation in the field for one year.

W. GEORGE JOHNSON

Crucible Steel Company Forms Petroleum Division

Crucible Steel Company of America has announced the formation of a petroleum division to handle the sale of all steels used in the production, refining, and marketing divisions of the petroleum industry, as well as to the equipment manufacturers.

W. George Johnson has been appointed manager of the petroleum division, and will operate from the general office of Crucible Steel Company of America located in the Chrysler Building, New York City.

Mr. Johnson has been with Crucible Steel Company for several years serving as sales metallurgist confining a greater part of his activities to the introduction and sale of the corrosion resistant, heat resistant, and high strength alloys, particularly to the petroleum industry.

With a division devoted exclusively to the development, sales, and servicing of the many steels used by the oil industry direct and through the equipment manufacturers, and with a personnel augmenting the regular sales force throughout the country, it is expected that better cooperation and results will be obtained for all concerned.

Special Features to Add Value to Houston Oil Show

Houston.—Following the trend of the oil industry in combining the practical and scientific in all phases of petroleum activity, the Sixth Annual Oil Equipment and Engineering Exposition which will be held in Houston, Texas, from April 8-13, inclusive, has developed to a greater extent than ever, plans for making the show educational as well as entertaining. Not only will technical exhibits show the latest devices for use in efficient methods of drilling, production, refining and transportation, but actual demonstration work also will provide a means of seeing just how equipment and methods are applied to field operations.

Giving a background to present day operation, the historical highlights of equipment development will be available for study. This is exemplified by a complete display of bits which will include some of the early types used for both rotary and cable tool work. In addition to this, there will also be shown an historical performance display of drilling bits with manufacturers from all over the country providing bits that have made record runs together with a new, unused bit of the identical type. The used bits will be accompanied by full data on the conditions under which they were run, including the field, kind of formation drilled, how long they remained in the hole and the footage made.

Other old tools and machinery that have been preserved will be on display and from an inspection of these the evolution of our present day equipment will often be evident.

Future Developments Indicated

The exhibit of new inventions will carry the study of equipment into the future. At this display will be shown, in whatever state of development they may be in, new devices for application to any branch of the petroleum industry that have not yet been marketed. Many of these inventions will be presented as working models and will enable manufacturers who are in the market for additions to their lines to make a thorough study of their possibilities.

Including both present-day practice and future development will be the exhibits of the various universities. These exhibits will show the results of experimental work together with the instruments being used for conducting that work. The perfecting of methods is often done in the studies conducted by the petroleum engineering departments of these institutions and the practical application of principles developed often results in economy and efficiency of operation.

Demonstration Work

On outside space adjacent to the main building in which the Oil Equipment and Engineering Exposition will be held there will be conducted demonstration work to show the application of equipment to meet field conditions. A considerable amount of heavy machinery will here be on display and through the facilities and great space offered will be shown in operation.

Methods of applying equipment and of meeting field emergencies will be demonstrated on this space also and will include the extinguishing of oil and gas fires and the prevention of such fires. Various other demonstrations will present safety measures for use on drilling wells; for production operations; for use in and around refineries, at pump stations and on pipe line work.

The First-Aid contest which aroused intense interest during the 1934 Houston Oil Show, will be even more comprehensive in scope. A complete schedule for all the teams participating is already being worked up and prices will be given to winners.

Entertaining Features

Announcement has been made by E. G. Lenzner, general manager of the Oil Equipment and Engineering Exposition, that plans have been completed for a number of the recreational events that will be held in conjunction with the 1935 Oil Show. Many of these are being sponsored by associations connected with the oil industry and others by Houston organizations.

The Oil Men's Banquet will be held under the supervision of the Salesmanship Club of Houston in cooperation with the Exposition management and other local organizations. All men connected with any branch of the petroleum industry will be invited to attend this event and the plans provide for a much more elaborate affair than last year. Important speakers will confine their remarks to topics of interest to those in attendance while continuous entertainment will make the banquet a matter of enjoyment.

A golf tournament will be held during the week of the show and will be conducted by a committee of oil men and manufacturers under the sponsor-

ship of the Brae-Burn Country Club. Entries for this tournament will be taken at the Exposition Building and at the Brae-Burn Country Club.

Due to Houston being the center of activity for the oil industry in this territory, considerable interest has been manifested in the facilities offered for all branches of oil operation. The Port of Houston has therefore offered an opportunity for the exhibitors to make free use of the Port Commissioners' launch, "R. J. Cummings", on which visitors will be taken through the entire channel and various other industrial sections. The Houston Real Estate Board will furnish transportation for a return trip and all the manufacturers and visitors will be invited to participate in this trip.

The visiting ladies of out-of-town oil men and manufacturers will be furnished free tickets with the compliments of the Exposition to a Bridge Luncheon which is being sponsored by Mrs. Chase E. Sutton and the Brae-Burn Country Club. They will also be entertained and taken on various trips of interest during the time the Oil Show is in progress.

Contents

In addition to the First-Aid Contest, there will be several other contests held during the show. One of these is for the salesmen and those in charge of exhibits but, in order to make it more equable, it will be divided into two divisions. One division will be for heavy equipment which will include rotaries, draw works, engines, hoists, derricks, pumping units and all machinery or tools of a similar nature. The other will be for small equipment and tools, and will include all specialties. The object of the contest is to secure the greatest amount of sales during the week of the Exposition and the management will award prizes to the winners in each division. This contest will be sponsored by the Salesmanship Club of Houston which will lay down the rules.

Due to the interest evidenced in the prizes awarded to exhibitors for their displays during previous shows, a larger number of trophies has been provided for the 1935 Exposition. A number of exhibits are therefore being more carefully designed and the result will be a better presentation of products for the benefit of the oil men attending. The judges who will make final decisions are: Chase E. Sutton, Branch Manager, Pure Oil Company; Stanley Gill, consulting petroleum engineer; E. C. Lawry, assistant production manager, Shell Petroleum Corporation; Paul Hubbard, assistant superintendent of production, Gulf Refining Company; and W. T. Doherty, assistant chief petroleum engineer, Humble Oil & Refining Company.

In judging the booths, attention will be paid to the method of presentation of equipment as well as to the appearance and beauty of the display. Factors to be included in making the awards also include whether the equipment is in operation and whether it is being demonstrated. The size of the booth will not be taken into consideration so that every exhibit, whether large or small, will be judged on the same basis. The reaction of foreign visitors will be given due consideration and a number of representative officials of foreign oil companies will be appointed to confer with the judges in making the selection of the exhibits to receive prizes.

Complimentary Tickets

Over 300,000 free complimentary tickets are being supplied for the use of oil men so that they can visit the Exposition as frequently as they desire and make a thorough study of the equipment on display. These tickets, however, will be limited to those who are directly connected with the oil industry since the Oil Equipment and Engineering Exposition is devoted exclusively to the display and demonstration of oil equipment and methods of operation.

As a further aid to both exhibitors and oil men, each visitor will have a small ribbon pinned on him as he goes through the gate. These ribbons will be in different colors to identify the branch of the industry in which he is engaged. General visitors often needlessly take up the time of exhibitors but with the ribbon of identification pointing out the oil men, additional courtesy and assistance can be accorded the really interested visitors.

Clark Acting Manager Houston Office for Walworth Company

A recent issue of THE OIL WEEKLY announced the appointment of E. L. Clark as manager of Walworth Company's Houston office. The announcement should have stated Mr. Clark had been appointed acting manager in absence of L. B. Wedge, who is recuperating at Santa Fe, New Mexico, from recent illness.

Clark Compressor Order For Crescent, Oklahoma

Clark Bros. Company, Olean, New York, announce a recently closed order for two 230-horsepower Clark compressor units to augment a battery of five of these Clark units in Eason Oil Company's gasoline plant at Crescent, Oklahoma. Installation will be made immediately.

Corbett Corporation Appointed Homestead Valve Representatives

Corbett Corporation, Sawyer & Winter Streets, Houston, has been appointed exclusive representative for Homestead Valve Manufacturing Company. L. E. Livingston, Fort Worth, formerly was exclusive representative.

New Installation of Clark Compressors Made in Oklahoma

Clark Bros. Company announce a recently closed order for five 230-horsepower compressor units for immediate installation in an extension of Westgate Oil Company's gasoline plant in the Oklahoma City field.

BULLETINS

Tractors

The use of tractors and road machinery for every type of oil field and pipe line work is described and illustrated in a new booklet "On the Job in the Oilfields" recently issued by Caterpillar Tractor Company of Peoria, Ill.

Synthetic Rubber

E. I. DuPont de Nemours & Co., Wilmington, Delaware, has issued a new edition of a booklet which describes "DuPrene," a synthetic rubber manufactured by the company. The new composition has a wide variety of uses.

Electrical Transmission

General Electric Company, Schenectady, N. Y., has issued an interesting paper on Direct Current Transmission which will be mailed to interested persons. The paper describes a new system for transmitting and distributing electrical power that makes it possible to inter-connect with static apparatus and non-synchronous systems.

Rubber Goods

The B. F. Goodrich Company, Akron, Ohio, has issued a 21-page booklet that describes over 200 hose and belting items manufactured by the company. The booklet was designed to simplify the selection of belting, hose and other rubber goods for industrial purposes.

Crane

Silent Hoist Winch & Crane Company, 762-772 Henry Street, Brooklyn, New York, has issued Bulletin No. 45 describing "Krane Kar" and "Krane Krawler", cranes manufactured by the company. The bulletin will be mailed to interested persons who request it.

Diesel Engine

Worthington Pump and Machinery Corporation, Harrison, New Jersey, has issued a 16-page booklet, designated as Bulletin S-500-B6D, which describes the company's line of Diesel engines. It will be mailed upon request.

Stainless Steel

Republic Steel Corporation, Massilon, Ohio, has published an 18-page booklet, "Enduro 18-8", describing the company's stainless steels. Copies are available upon request.

Tractor Attachments

Caterpillar Tractor Company, Peoria, Illinois, has issued a 48-page booklet, "Special Attachments for Special Needs", that illustrates and describes attachments ranging from bumpers to power take-offs.

New Equipment for the Field

Machinery....Tools....Catalogs....Books

▼ ▼ ▼

Pump Plunger

AXELSON MANUFACTURING CO.

Axelson Manufacturing Company, Los Angeles, California, has announced a new type pump plunger which the manufacturer claims represents a forward step in plunger valve design. Many methods to eliminate gas locks in pumps have been tried without complete success. Closer valve spacing allowed much less space for gas accumulation but did not entirely solve the problem because the blind cage, necessarily smaller in diameter than the plunger, created a minor gas-locking condition in itself, reducing the efficiency of the pump.

The new Axelson Perry plunger eliminates the unwanted gas pocket or trap around the plunger bottom valve, in no way restricting the full passage of fluids, the manufacturer claims. The entire valve for the Perry plunger, including the hardened ball guide, seal and ball and bushing, is completely contained within the plunger. These plungers are furnished in the regular, super-service and chromium-plated types.

Christmas Tree

OIL CENTER TOOL COMPANY

Oil Center Tool Company, Houston, has announced a "streamline" Christmas tree of conventional design which the manufacturer claims has a structural strength 75 percent greater

than similar type trees of earlier design. Through use of all-male and male-and-femal gate valves in the assembly, nipples are eliminated and height, weight and width are reduced. No tie-rods are necessary with this type of tree, since the male-end valve connection provides threads almost twice as large in diameter as normal.

Gaskets

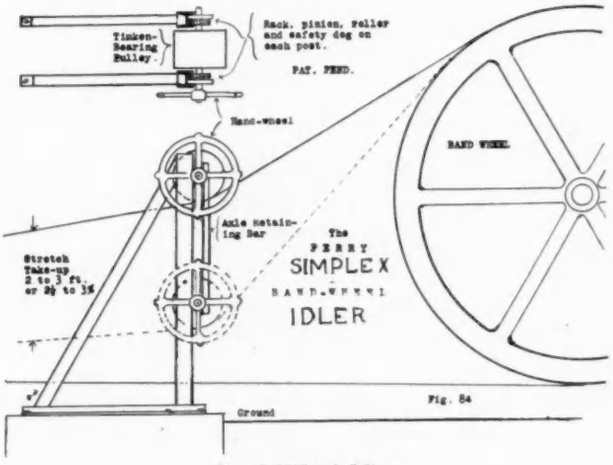
GOETZE GASKET & PACKING COMPANY

Goetze Gasket & Packing Company, New Brunswick, New Jersey, has announced a new metallic or semi-metallic gasket to withstand extreme pressure, temperature change and vibration. The new gasket was designed to produce full tightness with only 30 percent as much contact surface as on the plain flat metal gasket. The quicker sealing effect is accomplished by providing the faces with crossed ductile and resilient raised ribs, which the manufacturer claims will set themselves into tight contact, even on imperfect flange faces. The gaskets are available in solid copper, steel, iron, aluminum or lead, or as a metal shell with asbestos filler, and in any circular, elliptical or special shape.

Band Wheel Idler

HARRY M. SPERRY

Harry M. Sperry, 737 North Spring Street, Los Angeles, has designed and developed the "Simplex" band wheel idler for use with endless belt band wheel drivs. The manufacturer claims that use of this type idler will reduce the yearly



Band Wheel Idler

belt cost and result in a steadier operation of equipment. The pulley is equipped with Timken roller bearing, while a rack, pinion, roller and safety dog are on each post. The stretch take-up is from two to three feet, or from 2½ to three percent.

Boiler

LUCEY PRODUCTS CORPORATION

Lucey Products Corporation, Tulsa, Oklahoma, has the new Lucey oil country boiler with rivetless firebox, which is manufactured at Chattanooga, Tennessee.

Although it includes several new ideas in boiler construction, an outstanding feature is the elimination of all rivets from the firebox wrapper. By welding the firebox wrapper all around, all overlapping joints and troublesome

AXELSON

PUMPS &

SUCKER RODS

SAVE YOU

MONEY

ON EVERY

PUMPING

WELL

AXELSON MANUFACTURING CO.

P. O. Box 710, Vernon Station, Los Angeles

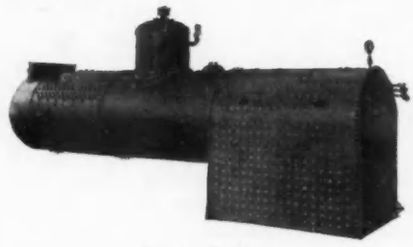
St. Louis 50 Church St., New York Tulsa

Mid-Continent and Eastern Distributor: Frick-Reid Supply Corp.

Rocky Mountain Distributor: Great Northern Tool & Supply Co.

rivets are eliminated, allowing the wrapper to be of uniform thickness throughout and permitting even heat transfer.

The new boilers have 84-inch fireboxes, of the open or dry bottom type. The mud ring is tested carefully, caulked, then welded throughout.



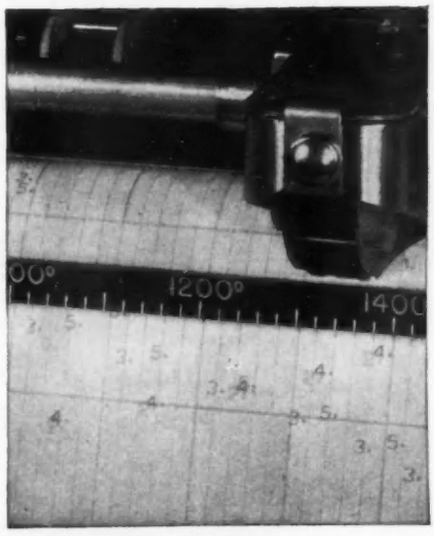
Lucey Boiler

The manhole is located directly over the firebox tube ends instead of ahead of the dome as is the general practice. The tube ends, where most scale and foreign matter collects, are made easily accessible for cleaning. The smoke box door is air tight, permitting better draft condition. Vertical tube arrangement permits easy cleaning.

Multiple-Point Recorder Marking System

LEEDS & NORTHRUP COMPANY

Reading of multiple-point instrument records is greatly simplified by a new system of "numerals in colors" introduced by Leeds & Northrup Company, Philadelphia. This marking system can be specified on Micromax strip-chart recorders for two, three, four or six points. With each of the thermocouples, resistance thermometer bulbs or other primary elements identified on the chart by a numeral, and each numeral distinguished from the others by being printed in a contrasting color, reading of records is made easy, errors are avoided and time is saved. Colors used for printing the numerals are: black, green, red, violet, yellow and blue.



Multiple-Point Recorder

The print-wheel on these Micromax Multiple-Point Recorders has a separate inking pad for each point to be recorded.

A circular giving further details and showing a reproduction of an actual chart in all six colors will be sent on request. Address the above company and ask for Circular No. 314-I.

Squeaks *from the* BULL WHEEL

They were discussing silk stockings.

They were invented in Queen Elizabeth's time," said the man who knows everything.

"Yes," commented another, "but they weren't discovered till the twentieth century."

A farmhand from Minnesota went to work for a Texas farmer. There had been a prolonged drouth, and every one on the farm was praying for rain. One day a few drops of rain began to fall, and all were delighted hoping for a real shower. The farmhand showed his joy by dancing about in the light fall, much to the annoyance of the farmer.

"Come in out of that rain, you jackass," he said.

"Shucks, I don't mind a few drops of rain," called back the man.

"Who said anything about you?" shouted the farmer. "We want every bit of that rain to fall on Texas."

"I tore up the sonnet I wrote last week."

"Tore it up? Why that was the best thing you ever did."

Bobby (reading in primer): "The ape in the cage is in a rage." Why is he in a rage, dad?

Dad: Somebody wants his glands, I suppose.

"Too bad about that lion tamer, isn't it?"

"How's that?"

"He's so swelled up over his press notices that he can't get his head in the lion's mouth."

BARGAIN

SIX BESSEMER AIR COMPRESSORS

Type 8, Sixty H.P. (13½"x20"), Direct Gas Driven, equipped with following compression cylinders:

3 compressors 12½" x 20",
1 compressor 14" x 20",
2 compressors 6¼" x 20",

Extra Compression Cylinders:
2—6¼"x20", 1—12½"x20".

Located El Dorado Field, Arkansas.

Write P. A. H.,
1104 Union Bank Building,
Pittsburgh, Pa.

"Say, waiter, is this an incubator chicken? It tastes like it."

Waiter: "I don't know, sir."

Customer: "It must be. Any chicken with a mother could never get as tough as this one."

The stout old lady struggled valiantly to mount the high step of the waiting omnibus.

"Come along, ma," urged the conductor; "if they'd given you more yeast when you was a gal you'd be able to rise better."

"Yes, young man," she retorted, as at last she hoisted herself triumphantly. "And if they'd given you a bit more yeast you'd be better bred."

"This stuff you sold me might be all right for some things," said the bald-headed man, "but it hasn't brung back my hair. Look at them bumps on my head."

The druggist looked at the label on the bottle.

"Great Scott," he gasped. "I have made a terrible mistake. This is bust-developer."

"Open your mouth, please," the dentist asked.

"But what shall I say?" retorted the fair patient.

H. L. Loveless testified in his suit for divorce that his wife had kept silent for fourteen months. This beats the previous record of fourteen seconds held jointly by several women.

Marie: "Rose had a man arrested for annoying her on the street last night!"

Madge: "My! I'll bet he was ugly!"

"What happened to Lena, your 600-pound fat lady? She looks a lot younger than she used to."

"She sure does. The outfit ran into a cyclone couple of weeks ago. It couldn't budge Lena, but it lifted her face."

"Just been lunching with your husband, Darling."

"So good of you, Angel; but I do hope it won't come to his secretary's ears—she's so jealous."

"Say, old man," volunteered the gossipy neighbor across the street, "I really think you should know that shortly after you left for your office this morning I saw a strange man call at the house."

"Oh, my God!" cried the newlywed in dismay. "As sure as thunder that woman has bought something else on the installment plan!"

Some lady visitors were going throug. a penitentiary under the escort of the superintendent. They came to a room where three women were sewing.

"Dear me," whispered one of the visitors, "what vicious looking creatures! Pray what are they here for?"

"Because they have no other home. This is our sitting room, and they are my wife and two daughters," blandly replied the superintendent.

Hubby—"We must think of the future. We ought to economize more. If I were to die where would you be?"

Wifey—"Why, I'd be right here. The question is, where would you be?"

Any Length Casing, Liner or Screen

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IN ONE ROUND TRIP

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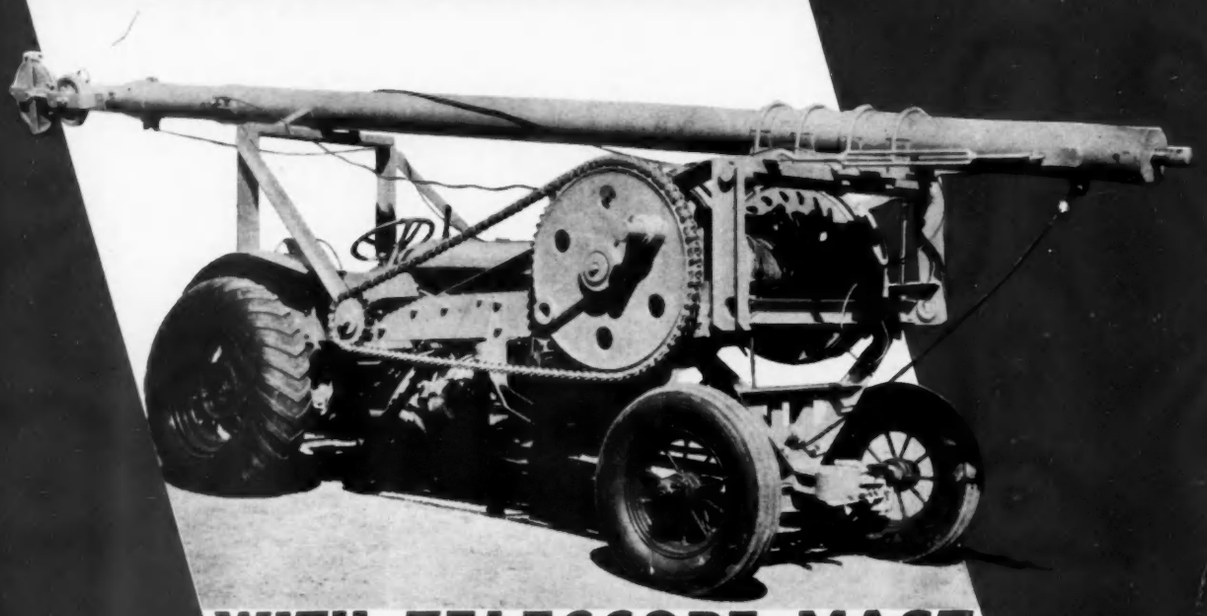

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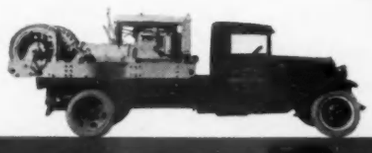

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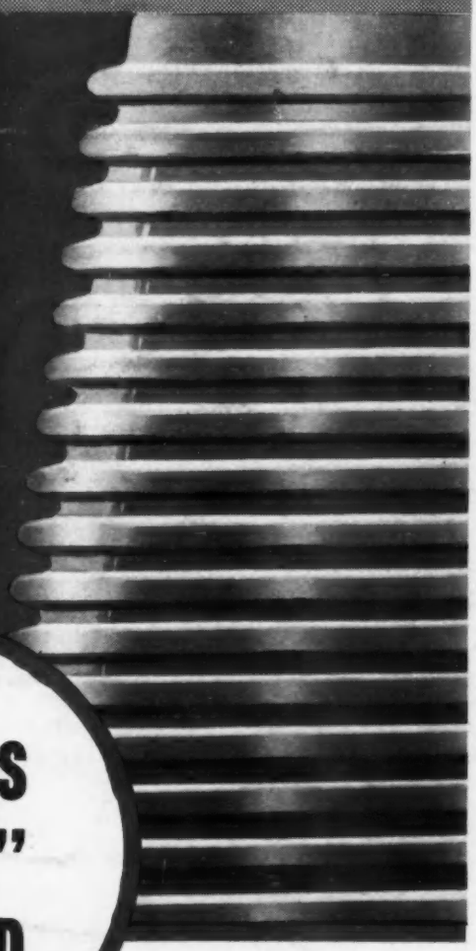

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